

CITY AND COUNTY OF BRISTOL



THE
HEALTH OF BRISTOL
IN
1950

R. H. PARRY

M.D., B.S. (LOND.), F.R.C.P., D.P.H., K.H.P.

Medical Officer of Health

CONTENTS

	PAGE
I. GENERAL REVIEW OF HEALTH SERVICES	
1. M.O.H.'s Introductory Survey: Health of City of Bristol in 1950	6
2. Vital Statistics	10
3. Prevalence and Control of Infectious and other Diseases	21
II. PERSONAL HEALTH SERVICES	
1. MATERNITY AND CHILD WELFARE SERVICES	
(i) Care of Mothers and Young Children	30
(ii) The Midwifery Service	36
(iii) Day Nurseries, Residential Nurseries, and Children's Homes	37
(iv) Unmarried Mothers' Welfare	39
(v) Sterility Clinics	41
(vi) Maternal Mortality in Bristol	42
(vii) Statistics	43
2. EXTERNAL NURSING SERVICES	
(i) Health Visiting Service	50
(ii) The Home Nursing Service	53
(iii) Ancillary Services	54
3. DENTAL HEALTH	56
4. MENTAL HEALTH SERVICE	58
5. PREVENTION OF ILLNESS, CARE AND AFTER CARE	
(i) Tuberculosis—Care and After Care	66
(ii) Venereal Diseases	68
(iii) Nutrition	71
6. HEALTH AND TUTORIAL EDUCATION	
(i) Health Education	72
(ii) Teaching and Training	77
7. VACCINATION AND IMMUNISATION	79
8. AMBULANCE SERVICES	80
III. ENVIRONMENTAL HEALTH SERVICES	
(1) SANITARY CIRCUMSTANCES	84
(ii) Housing	88
(iii) Inspection of Meat and other Foods	92
(iv) Milk and Food Inspection	97
(v) Atmospheric Pollution, Offensive Trades and Nuisances	114
(vi) Rat Destruction: Disinfection and Disinfestation	116
2. SHOPS AND YOUNG PERSONS (Employment) ACTS	124
3. METEOROLOGICAL OBSERVATIONS	127
4. PUBLIC ANALYST'S REPORT	128
IV. PORT HEALTH	166
V. SPECIAL REPORTS	
1. The Preventive Medicine Laboratories in 1950	194
2. The Department of Preventive Medicine 1933-51	201
3. The Geriatric Services of Bristol	Facing 206
4. Medical Records of the Health Department	207
5. School Health	Facing 208
VI. APPENDICES	
1. Preventive Medicine Department 1950.	
2. Public Health Department 1950.	
3. Health Committee 1950.	

1.

GENERAL REVIEW
OF
HEALTH SERVICES

1. The Health of the City of Bristol in 1950.
2. Summary of Vital Statistics and Detailed Tables.
3. Prevalence and Control of Infectious Diseases.

1. THE HEALTH OF THE CITY AND COUNTY OF BRISTOL IN 1950

My Lord Mayor, Ladies and Gentlemen,

It is now 21 years since I made my first report as medical officer of health on the health and sanitary circumstances of the city. These years have been filled with a multitude of changing problems during which the city has continued to grow in area and in population. We live in an age of change in which there is ever-increasing pressure towards new social forms and institutions: some good, some bad; some neither wholly good nor wholly bad.

During this period of profound change 1949 represented the first full year of the new National Health Service in operation with all its many repercussions on the local health services. Over the years prior to the new service there had been almost uninterrupted progress in the environmental conditions and in the health of the people of this city. As the same people were concerned in the service, although under different administrative arrangements, it was not to be expected that the change would have any immediate effect upon the health of the people, so that in many respects 1950 was a year in which continued progress was made—as indeed progress was made during the even more uncertain year of 1949.

Vital Statistics

(See page 10)

The population of the city in 1950 was estimated at mid-year to have reached a new high total of 442,600; in 1930 it was 391,445; an increase of over 50,000 in 21 years. It is worthy of comment that the birth-rate at 16.03 (per 1,000 population) continues to fall from the 1946 post-war peak (it was 15.73 in 1930). The natural increase per 1,000 population also declined still further to 4.55 per 1,000 population compared with 5.96 in 1949; 7.48 in 1948; 9.39 in 1947; and 4.14 in 1930.

Infant Mortality

(See page 12)

When one looks back over these 21 years the records show that in 1930 there were 58.3 infant deaths (per 1,000 live births); whereas in 1950 the Bristol figure had fallen to an all-time low record of infant deaths in the first year of life—23 infant deaths (per 1,000 live births). Broadly speaking six babies died out of every 100 in 1930, compared with two in every 100 in 1950—an improved survival ratio of 3: 1 (Reference to the comparative table 5 on page 18/19 which compares the figure for 20 large towns of England and Wales, shows Bristol to have the lowest infant mortality rate). Maternal mortality at the rate of 0.96 per 1,000 total births (seven deaths) is the second lowest figure yet reached—the lowest being 0.74 in 1948.

Maternity and Child Welfare

(See page 30)

These figures in themselves reflect great credit on all who, by efficacy of treatment or by the efficiency of the ante-natal and preventive aspects, have made Bristol's maternity and child welfare services unsurpassed.

It is recorded above that the infant mortality rate of this city is now one of—if not the lowest—in the country. Elsewhere in this report there is a summarised report on the findings of a survey on "Maternal Mortality in Bristol." This survey was undertaken by Dr. A. I. Ross when chief assistant medical officer of health, maternity and child welfare, and was published in its full form in the "Medical Officer" (July 1951).

In 1930, 22 mothers died from causes directly connected with child birth which was equal to a maternal mortality rate of 3.57 per 1,000 births. In 1950 the rate has fallen to 0.96 per 1,000 total births and only seven mothers died. When this is translated to simple terms it means that where three mothers died in 1930 only one dies to-day—and this despite the fact that there were more births in 1950 (7,096) compared with 1930 (6,803).

Infectious Diseases

(See page 21)

In 1930, when I first became medical officer of health, the problem of diphtheria was undefeated; we were just starting on mass immunisation and there were 1,484 cases and 41 deaths—almost one in 40 died who contracted the disease! In 1950 there were no confirmed cases and no deaths. By good team work a preventive medicine ideal was achieved—a triumph for mass immunisation. Will this record continue? One in three (32.12%) of the child population remain unprotected despite all our efforts by propaganda and education.

It will be remembered that in my introductory survey in 1949 I wrote: “I wish to draw particular attention to the incidence of poliomyelitis in the city. This prevalence, no doubt, will mean a large number of carriers which in its turn will account for the occurrence of more cases in the city during the next few years.” This forecast has, unfortunately, been borne out by the figure for 1950. Poliomyelitis in 1950 reached an intensity never before experienced in Bristol, there being 277 confirmed notifications with 30 deaths.

Tuberculosis decreased still further in 1950, there being 495 cases of pulmonary tuberculosis, compared with 552 in 1949, showing a decrease of 57, but this merely shows a return to the pre-war average of some 500 cases per annum. Non-pulmonary tuberculosis was similarly reduced from 83 to 63 cases as compared with 1949. There is still much room for improvement, but new plans for tuberculosis, which I hope will be fully reported on in my 1951 report, are nearing completion.

Specialist Officers

Three important aspects of the department's work have been developed further during 1950:

(1) *Nutrition* (See page 71). The nutritionist (Miss C. M. Wood, M.A.) has been particularly active in nutrition education by lecturing; by arranging demonstrations and talks at clinics to students in the different branches, and by giving individual advice where requested. In addition, important research work is being undertaken by her into “The nutrition of mothers occupied outside the home”; on weaning problems; and in conjunction with the Ministry of Health a survey into “The degree of maturity of 14-year-old boys.”

(2) *Medical Records* (See page 207). The appointment of a widely experienced medical records officer (Mr. R. G. Emblem) is gradually raising the standard and efficiency of record keeping to a new high level. This work is often necessarily of the slow and painstaking re-organisational character as it involves new methods and much liaison with other officers before a working plan is adopted.

Despite this it is already apparent that the collation of statistics is gradually being more closely related to the problems of epidemiology and medico-social surveys with far-reaching results. Much data is now recorded in such a way as to make it susceptible to mechanical analysis (and here the help of the City Treasurer is much appreciated)—with a resultant increase in the speed with which information, from which policy decisions can be reached, is

made available. It also means that more detailed and complex cross correlations of data are possible than hitherto and that the Health Committee and the department will have access to more information than formerly to guide their actions and decisions.

(3) *Health Education* (See page 72). During 1950 my personal assistant (Mr. D. M. Evans, B.A.) has been active in stimulating health education as an important aspect of his work. His help as a qualified teacher is particularly valuable in giving guidance in group teaching methods and providing visual aids for the many lectures undertaken by the department. Being required to maintain an overall picture of the department's activities he is further requested from time to time to lecture on the work of the department or on health education problems, to arrange courses and visits for overseas visitors, and to meet the needs of students. During 1950 a health education lecture room was fitted up in the Central Clinic at which all forms of lectures, demonstrations, film shows and meetings can be held. This has greatly facilitated the work of co-ordinating health education activities.

All these activities of the specialist officers are reported on more fully in the body of the report.

School Health

Is comprehensively reported on later in this report and merits a separate introduction and so needs no comment here.

Mental Health

(See page 58)

The important work undertaken by the mental health officers, under the supervision of Dr. Hutton, continued smoothly during 1950, but it is noteworthy that frictionless relations were maintained by officers in their association with the Regional Hospital Board, as well as with general practitioners. This is of vital importance in the admission of cases to hospital causing the least delay and the minimum amount of avoidable distress to relatives.

Port Health

(See page 166)

When it is remembered that the volume of shipping traffic arriving in Avonmouth, Portishead and Bristol is now double that of 1946—with 1,118 foreign-going ships with a tonnage of 2,955,899 tons entering the port compared with 565 in that year, and with 42,661 passengers and crew being dealt with by the port medical officers—it will readily be appreciated that vigilance is necessary if the health of the city is to be safeguarded.

Environmental Health

(See page 84)

In the field of environmental health the sanitary inspectors have again been most active in the work of educating the public and special groups of food handlers have received a course of lectures on the hygiene of food handling. The chief sanitary inspector further, in his report, gives a remarkable picture of the comprehensive and invaluable work undertaken in surveying and categorising housing in the city. This information is valuable to the Housing, Planning and other departments.

Similar efforts are being made by the health visitors in group health education at clinics and elsewhere in an effort to reach housewives.

Acknowledgements

During the years that I have been medical officer of health, it has been my custom to pay tribute at the passing of friends and colleagues and to record the retirement of some whose service has been great; or the movement of senior officers to take up appointments elsewhere.

On the 8th May, 1950, Dr. B. A. Peters, M.D., D.P.H., died after a medical career of great distinction and of invaluable service to clinical medicine. He was connected with Ham Green Hospital first as resident medical officer and then as medical superintendent from the date of his appointment in 1910 until his retirement on the 3rd September, 1950, with the exception of his war service with the R.A.M.C. in 1917-19. He was an outstanding clinician. He watched the accommodation for infectious diseases grow in size and greatly improved the efficiency of the services provided. Dr. Peters rendered great services to the city and Bristol owes much to his dilligence and unflagging energy throughout these years. The children of Bristol owed much to Dr. Peters for his skill and ability; he saved many lives and alleviated much suffering.

Dr. C. J. C. Faill, F.R.C.P., retired in July 1950 having been connected with the department from the date of his appointment as tuberculosis officer in 1912 to the date of his transfer to the Regional Hospital Board in July 1948. Dr. Faill was popular with his patients and his cheerful care will be missed by many.

In November, 1950, Dr. A. I. Ross, M.D., D.P.H., chief assistant medical officer of health (maternity and child welfare) left the department to become deputy medical officer of health at Leicester. Dr. Ross had been with the department from June 1939, but had spent five years serving with the R.A.M.C. in the Far East and elsewhere. He was appointed chief assistant maternity and child welfare on 1st January 1947.

I would like to express my indebtedness to the staff for their loyal co-operation, to my chief assistant medical officers and chief administrative assistant, Mr. J. G. Watson, and in particular to my deputy, Dr. R. C. Wofinden, whose help has been invaluable. To the Chairmen of the Health and Education, Housing and Welfare Committees I am indebted for their invaluable assistance and to the members of the committees for their encouragement. I wish also to thank the Town Clerk and the Chief Officers for their ever willing assistance and co-operation.

Your obedient servant,

R. H. PARRY, *Medical Officer of Health.*

CENTRAL HEALTH CLINIC,
BRISTOL, 2.

2. SUMMARY OF VITAL STATISTICS

Population

The estimated population from 1940-49 was of the civilian population only and the various rates calculated on this basis were, in consequence, slightly overstated. The rates for 1943 to 1945 were also subject to some further adjustment consequent on the correction of the Registrar-General's estimate of population of these years, particulars of which were given in my report for 1946.

For 1950, however, the figure has been modified to include the numbers of H.M. Forces stationed in the area. The Registrar-General estimates the total population of the city at mid-1950 as 442,600, an increase of 2,860 on the total figure supplied for mid-1949 (439,840). Calculations of rates, where appropriate, have been based on this figure.

				1950
Estimated total population (mid-year)	.....	.....	.....	442,600
Marriages	.....	.....	.....	3,512
(Rate per 1,000 population)	.....	.....	.....	15.87
Births (area comparability factor—0.99)	.....	.....	.....	7,096
(Rate per 1,000 population)	.....	.....	.....	16.03
Stillbirths	.....	.....	.....	158
(Rate per 1,000 total births)	.....	.....	.....	21.78
Deaths	.....	.....	.....	5,082
(Rate per 1,000 population (crude))	.....	.....	.....	11.48
(Rate per 1,000 population (adjusted))	.....	.....	.....	11.14
(Area comparability factor)	.....	.....	.....	0.97
Natural Increase per 1,000 population	.....	.....	.....	4.55
Deaths under one year	.....	.....	.....	165
(Rate per 1,000 live births)	.....	.....	.....	23
Deaths under one month	.....	.....	.....	112
(Rate per 1,000 live births)	.....	.....	.....	15.78
Deaths from puerperal causes	.....	.....	.....	7
(Rate per 1,000 total births)	.....	.....	.....	0.96

Matters of particular interest in the statistics, referred to in greater detail below, are:

Decline of birth-rate.
 Illegitimacy—decreasing.
 Low record for infant mortality.

<i>Marriages</i> (Rate: 15.87 per 1,000 population)						per 1,000 home population
1950	.....	.....	.....	.....	3,512	15.87
1949	.....	.....	.....	.....	3,783	17.20
1948	.....	.....	.....	.....	3,786	17.41
1947	.....	.....	.....	.....	4,033	18.82

Births (Rate: 16.03 per 1,000 population)

Births	Y E A R				
	1946	1947	1948	1949	1950
Total registered live births	8,929	10,082	8,485	8,326	7,833
1950 compared with other years (+ or -)	-1,096	-2,249	-652	-493	—
Non-resident births in Bristol	1,105	1,026	889	1,005	956
Births—Bristol residents only	7,824	9,056	7,596	7,321	6,877
Births to Bristol residents outside City boundary	217	87	235	185	219
Registered live births—R.G.'s corrected figure for Bristol	8,041	9,143	7,831	7,506	7,096
B'th-rate per 1,000 pop. (civ. 1946/48)	19.28	21.33	18.00	—	—
B'th-rate 1,000 total pop. (1949/50)	—	—	—	17.07	16.03

From the table it will be seen that the birth-rate (16.03 per 1,000 population) continues to decline from its post-war peak, but, as shown above, the rate is still greater than the death-rate (crude rate 11.48 per 1,000 population)—the natural increase was 4.55 per 1,000 population as compared with 5.96 per 1,000 population in 1946.

Illegitimacy (Rate: 44 per 1,000 live births)

	1949	1950
Total illegitimate live births registered in Bristol	418	361
% of total live births	4.9%	4.6%
Non-resident illegitimate births in Bristol	75	78
Non-resident % of illegitimate births	18%	21.6%
Registrar-General's corrected total illegitimate live births—Bristol	379	310

The decline from the 1945 peak of 711 illegitimate births or 9% of that year's total live births has continued. The corrected figures, which take account of inward and outward transfers, provided by the Registrar-General, were 310 compared with 429 in 1948 and 379 in 1949.

Stillbirths (Registrar-General's corrected number 158. Rate per 1,000 total births, 21.78).

The stillbirth rate for 1950 was 21.78 per 1,000 total births as compared with 20.48 per 1,000 total births, which was a new record in the previous year.

There were 195 stillbirths registered in 1950 compared with 208 in 1949. Of these 195, 38 (52 in 1949) were outside-city cases. One case only was transferable to Bristol from outside the city boundary (1 in 1949).

Deaths (Rate: (Crude) 11.48 per 1,000 population)
 (Adjusted) 11.14 per 1,000 population
 (Area comparability factor 0.97).

	1949	1950	Increase or decrease on previous year	Rate per 1,000 population 1950
Total number of deaths in City	5,342	5,604	+262	12.66
Total deaths non-Bristol residents	676	714	+38	
Total deaths Bristol residents only ..	4,881	5,082	+198	11.48 (crude) 11.14 (adjusted)

Natural Increase (Rate: 4.55 per 1,000 population).

The natural increase in the population of Bristol, that is, the excess of births over deaths during the year, was 2,014 compared with a natural increase rate of 2,622 in 1949 (5.96 per 1,000 population).

Infant Mortality (Total 165) (Rate: 23 per 1,000 live births).

During 1950, 230 infants (including 67 non-Bristol) died within one year of birth—30 less than in the previous year when there were 260 (including 72 non-Bristol). After correction for transfers the Registrar-General's figure is 165 (192 in 1949). The infant mortality rate for 1950 at 23.25 is a new low record rate. The previous best year was 1948 when the rate was 24.51 per 1,000 live births. As will be seen from Table 5 this is the lowest rate of the twenty great towns shown and one of the lowest records in this country.

	1950	1949	1948	1947
Legitimate infant mortality rate per 1,000 legitimate births	23	25	24	29
Illegitimate infant mortality rate per 1,000 illegitimate births	29	34	33	25

The greater mortality of illegitimate infants (compared with legitimate infants), always in evidence in previous years, was reversed in 1947, but in 1948, 1949 and 1950 the tendency has re-asserted itself. The gap is, however, once more being closed.

Neo-natal deaths (112) (Rate: 15.78 per 1,000 live births).

The Registrar-General's figures for this age group show that the number of babies dying in Bristol during the first month of life was 158 compared with 179 in 1949. After correction for residence at time of death, this figure becomes 112 compared with 133 in 1949. This age group represents 68% of the number of infants under one year of age (69% in 1949).

In 1950 (uncorrected for transfers), of the total neo-natal deaths 61 (39% approx.) occurred on the first day of life and from one day to within the first week 76 (48% approx.). In 1949 these figures were respectively 36% and 40%. In 1950, after correction for transfers, there were 48 neo-natal deaths on the first day and 49 in the one day to one week age group.

In 1950, of the 112 neo-natal deaths five were illegitimate.

Legitimate infant mortality—15.77 per 1,000 legitimate live births.

Illegitimate infant mortality—16.13 per 1,000 illegitimate live births.

Maternal mortality (7) (Rate: 0.96 per 1,000 total births).

There were nine maternal deaths in the city during 1950 (as listed below). Of these, seven were Bristol residents.

During 1948 the lowest number of cases ever in Bristol, a total of 10 and a net figure of 6, were recorded and the resulting low record of 0.74 per 1,000 total births was established. The rate—0.96 of 1950—is the second lowest figure yet reached.

1950— <i>Causes</i> :	Tubal pregnancy	1	}	9
	Toxaemia of pregnancy	.....	.....	4
	Eclampsia	.....	.....	1
	Self-induced abortion	.....	.....	1
	Pulmonary embolism	.....	.....	1
	Cerebral haemorrhage	.....	.....	1

NOTE.—All vital statistics collated by the Department of Public Health, Bristol, are now arranged in conformity with the Sixth Revision of the "International Statistical Classification of Diseases, Injuries and Causes of Death 1948," prepared by the World Health Organisation and adopted by the Registrar-General.

VITAL STATISTICS.

Table 1.—*Supplied by the Registrar General.*Population, marriages, births, deaths, natural increase, infant mortality, for
Calendar Year 1950 and previous seven years—Bristol.

	1950	1949	1948	1947	1946	1945	1944	1943
Estimated population (mid year) ... { Civ. ... Home	442,600	439,740	435,000	428,600	417,090	414,320	405,530	370,800
Marriages.								
Number ...	3,512	3,783	3,786	4,033	3,818	3,919	3,071	3,123
Rate per 1,000 populat { Civ. ... Home	15.87	17.21 17.20	17.41	18.82	18.31	18.92	15.15	16.8
Births.								
Legitimate—males ...	3,506	3,687	3,730	4,430	3,913	3,352	3,726	3,369
females ...	3,280	3,440	3,672	4,239	3,621	3,078	3,492	3,082
Illegitimate—males ...	143	204	225	241	255	301	290	214
females ...	167	175	204	232	252	296	259	220
Total ...	7,096	7,506	7,831	9,142	8,041	7,027	7,767	6,885
Rate per 1,000 population ...	16.03	17.07	18.00	21.33	19.28	16.96	19.15	18.57
Stillbirths.								
Legitimate—males ...	80	77	75	100	117	78	115	101
females ...	62	72	89	94	86	81	85	97
Illegitimate—males ...	6	3	4	11	8	9	15	3
females ...	10	5	7	4	6	9	3	6
Total ...	158	157	175	209	217	177	218	209
Rate per 1,000 total births ...	22	20	22	22	26	25	27	29
Deaths.								
Males ...	2,543	2,481	2,308	2,563	2,424	2,387	2,308	2,327
Females ...	2,539	2,403	2,268	2,551	2,473	2,418	2,149	2,271
Total ...	5,082	4,884	4,576	5,114	4,897	4,805	4,457	4,598
Rate per 1,000 population ...	11.48	11.11	10.52	11.93	11.75	11.60	10.99	12.40
Natural increase per 1,000 population ...	4.55	5.96	7.48	9.39	7.54	5.36	8.16	6.17
Deaths under 1 year.								
Legitimate ...	156	179	178	255	273	208	244	290
Rate per 1,000 legit. live births	23	25	24	29	36	32	34	45
Illegitimate ...	9	13	14	12	26	37	24	23
Rate per 1,000 illgt. live births	29	34	33	25	51	62	44	53
Total deaths ...	165	192	192	267	299	245	268	313
Rate per 1,000 births ...	23	26	25	29	37	35	35	45
Deaths under 1 month.								
Total deaths ...	112	133	119	160	192	140	143	191
Rate per 1,000 live births ...	16	18	15	18	24	20	18	28
Diarrhoea and enteritis— (under two years)								
Deaths ...	2	5	3	16	25	22	33	31
Rate per 1,000 live births ...	0.28	0.66	0.38	1.7	3.1	3.1	4.2	4.5
Maternal mortality.								
Deaths from:—								
Abortion with sepsis ...	1							
Other abortion ...	4							
Complications of pregnancy and delivery ...	—							
Sepsis of childbirth and the puerperium ...	2							
Other complications of the puerperium ...	7	8	6	11	18	9	10	10
Total deaths ...	0.96	1.04	0.74	1.17	2.18	1.25	1.25	1.41
Rate per 1,000 total births ...								

Table 2.—Supplied by the Registrar General.

Birth-rates, death-rates analysis of mortality, maternal mortality and case-rates for certain infectious diseases in the year 1950.

(Provisional figures based on Quarterly Returns).

	Bristol	England and Wales	126 County Boroughs and great towns including London	148 Smaller towns (resident populations 25,000 to 50,000 at 1931 Census)	London Administrative County
Rates per 1,000 Home population.					
BIRTHS :					
Live	16.03	15.8	17.6	16.7	17.8
Still	0.36	0.37	0.45	0.38	0.36
DEATHS :					
(Adjusted)	11.14				
All cases	11.48	11.6	12.3	11.6	11.8
Typhoid and paratyphoid fevers ...	—	0.00	0.00	0.00	0.00
Whooping cough ...	0.01	0.01	0.01	0.01	0.01
Diphtheria	—	0.00	0.00	0.00	0.00
Tuberculosis	0.45	0.36	0.42	0.33	0.39
Influenza	0.11	0.10	0.09	0.10	0.07
Smallpox	—	—	—	—	—
Acute poliomyelitis (including polioencephalitis)	0.07	0.02	0.02	0.02	0.01
Pneumonia	0.49	0.46	0.49	0.45	0.48
NOTIFICATIONS :					
Typhoid fever	—	0.00	0.00	0.00	0.01
Paratyphoid fever ...	0.01	0.01	0.01	0.01	0.01
Meningococcal infection	0.02	0.03	0.03	0.02	0.03
Scarlet fever	1.86	1.50	1.56	1.61	1.23
Whooping cough ...	6.96	3.60	3.97	3.15	3.21
Diphtheria	—	0.02	0.03	0.02	0.03
Erysipelas	0.30	0.17	0.19	0.16	0.17
Smallpox	—	0.00	0.00	—	—
Measles	6.41	8.39	8.76	8.36	6.57
Pneumonia	1.20	0.70	0.77	0.61	0.50
Acute poliomyelitis (including polioencephalitis)	0.52	0.13	0.12	0.11	0.08
Non-paralytic	0.11	0.05	0.05	0.06	0.05
Food poisoning ...	0.18	0.17	0.16	0.14	0.25
Rates per 1,000 live births.					
Deaths under 1 year of age	23	29.8(A)	33.8	29.4	26.3
Deaths from diarrhoea and enteritis under 2 years of age	0.28	1.9	2.2	1.6	1.0
Rate per 1,000 total births (i.e., live and still).					
Abortion with sepsis ...	—	0.09	Per million women aged 15-44 in England and Wales. { 7 4		
Other abortion	0.14	0.05			
Complication of pregnancy and delivery ...	0.55	0.54			
Sepsis of childbirth and the puerperium ...	—	0.03			
Other complications of the puerperium ...	0.27	0.15			
NOTIFICATIONS :					
Puerperal fever and pyrexia	15.44	5.81	7.43	4.33	6.03

(A) = Per 1,000 related births.

Table 3

Compiled from figures supplied by the Registrar-General.

TOTAL DEATHS BY CAUSE AND AGE DURING THE CALENDAR YEAR 1950—BRISTOL

Cause of Death	Sex	All Ages	0—1	1—5	5—15	15—45	45—65	65 plus
All Causes	M	2543	104	23	20	177	722	1497
	F	2539	61	12	18	153	515	1780
1. Tuberculosis, respiratory	M	89	—	1	—	28	47	13
	F	93	—	2	—	55	28	8
2. Tuberculosis, other	M	14	1	2	1	2	7	1
	F	5	—	1	1	1	1	1
3. Syphilitic disease	M	14	—	—	—	—	5	9
	F	4	—	—	—	—	—	4
4. Diphtheria	M	—	—	—	—	—	—	—
	F	—	—	—	—	—	—	—
5. Whooping Cough	M	1	1	—	—	—	—	—
	F	1	1	—	—	—	—	—
6. Meningococcal infections	M	—	—	—	—	—	—	—
	F	—	—	—	—	—	—	—
7. Acute poliomyelitis	M	17	2	4	5	6	—	—
	F	13	2	1	8	2	—	—
8. Measles	M	2	1	1	—	—	—	—
	F	1	—	—	—	—	—	1
9. Other infective and parasitic disease	M	7	—	2	—	2	1	2
	F	2	—	—	—	—	—	1
10. Malignant neoplasm, stomach	M	81	—	—	—	6	28	47
	F	69	—	—	—	1	16	52
11. .. Lung. bronchus	M	125	—	—	—	8	76	41
	F	19	—	—	—	2	7	10
12. .. breast	M	—	—	—	—	—	—	—
	F	72	—	—	—	8	34	30
13. .. uterus	F	43	—	—	—	3	23	17
14. Other malign't and lymphatic neoplasms	M	243	—	1	2	12	73	155
	F	208	—	—	—	15	77	116
15. Leukaemia, aleukaemia	M	11	—	—	1	3	2	5
	F	5	—	—	—	1	2	2
16. Diabetes	M	17	—	—	—	—	2	15
	F	29	—	—	1	2	4	22
17. Vascular lesions of nervous system	M	252	—	—	—	4	53	195
	F	401	—	—	—	4	58	339
18. Coronary disease, angina	M	315	—	—	—	10	115	190
	F	188	—	—	—	—	36	152
19. Hypertension with heart disease	M	122	—	—	—	1	39	82
	F	116	—	—	—	—	38	78
20. Other heart disease	M	416	—	—	1	11	49	355
	F	571	—	—	—	16	57	498
21. Other circulatory disease	M	72	—	—	—	4	18	50
	F	85	—	—	1	2	10	72
22. Influenza	M	26	—	—	1	3	12	10
	F	21	—	—	1	2	6	12
23. Pneumonia	M	111	17	1	1	5	24	63
	F	104	6	4	2	1	14	77
24. Bronchitis	M	141	—	—	—	3	47	91
	F	104	1	1	—	—	12	90
25. Other diseases of respiratory system	M	37	1	—	—	4	18	14
	F	15	1	—	—	2	4	8
26. Ulcer of stomach and duodenum	M	36	—	—	—	3	17	16
	F	16	—	—	—	1	7	8
27. Gastritis, enteritis and diarrhoea	M	10	1	1	—	2	3	3
	F	17	—	—	—	—	5	12
28. Nephritis and nephrosis	M	26	—	—	—	4	8	14
	F	35	—	1	—	3	7	24
29. Hyperplasia of prostate	M	42	—	—	—	—	9	33
30. Pregnancy, childbirth, abortion	F	7	—	—	—	5	2	—
31. Congenital malformations	M	27	20	2	1	2	2	—
	F	27	18	—	1	5	3	—
32. Other defined and ill-defined disease	M	195	59	3	3	20	37	73
	F	199	32	1	2	14	47	103
33. Motor vehicle accidents	M	29	—	2	3	10	10	4
	F	15	—	1	1	2	6	5
34. All other accidents	M	39	1	3	1	16	8	10
	F	38	—	—	—	1	5	32
35. Suicide	M	20	—	—	—	5	9	6
	F	15	—	—	—	5	5	5
36. Homicide and operations of war	M	6	—	—	—	3	3	—
	F	1	—	—	—	—	—	1

TABLE 4. Compiled from figures supplied by Registrar-General.
 PRINCIPAL CAUSES OF DEATH DURING CALENDAR YEAR 1950.—BRISTOL.

Death Rate per 1,000 total Pop.	Disease	Net Deaths in 1950	Per cent. to total deaths
.411	1. Tuberculosis, respiratory	182	3.58
.043	2. Tuberculosis, other	19	.37
.041	3. Syphilitic disease	18	.35
—	4. Diphtheria	—	—
.005	5. Whooping Cough	2	.04
—	6. Meningococcal infections	—	—
.068	7. Acute poliomyelitis	30	.59
.007	8. Measles	3	.06
.020	9. Other infective and parasitic disease	9	.18
.339	10. Malignant neoplasm, stomach	150	2.95
.325	11. lung, bronchus	144	2.83
.163	12. breast	72	1.42
.097	13. uterus	43	.85
1.019	14. Other malignant and lymphatic neoplasms	451	8.87
.036	15. Leukaemia, aleukaemia	16	.32
.104	16. Diabetes	46	.91
1.475	17. Vascular lesions of nervous system	653	12.85
1.136	18. Coronary disease, angina	503	9.90
.538	19. Hypertension with heart disease	238	4.63
2.230	20. Other heart disease	987	19.42
.355	21. Other circulatory disease	157	3.09
.106	22. Influenza	47	.92
.486	23. Pneumonia	215	4.23
.554	24. Bronchitis	245	4.82
.117	25. Other diseases of respiratory system	52	1.02
.117	26. Ulcer of stomach and duodenum	52	1.02
.061	27. Gastritis, enteritis and diarrhoea	27	.53
.138	28. Nephritis and nephrosis	61	1.20
.095	29. Hyperplasia of prostate	42	.83
.016	30. Pregnancy, childbirth, abortion	7	.14
.122	31. Congenital malformations	54	1.06
.890	32. Other defined and ill-defined disease	394	7.75
.099	33. Motor vehicle accidents	44	.87
.174	34. All other accidents	77	1.52
.079	35. Suicide	35	.69
.016	36. Homicide and operations of war	7	.14
11.482	All Causes	5082	

Table 6.

Notifiable Cases during 1950 (including Port cases). Local Figures.

Notifiable Diseases	Notifications													Attack rate per 1,000 Population	Deaths (Corrected for transfers) not necessarily relevant to notifications of 1950																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	At all ages	At ages—years :							Removed to Hospital		Notified in each quarter				All ages	At ages—years :																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		At ages—years :														Under 1	1 to 5	5 to 15	15 to 45	45 to 65	65 and upwards																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and upwards																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Diphtheria ...	—																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							</

* 10 cases occurred at home of which five were subsequently removed to hospital. No deaths were directly attributed to Puerperal Pyrexia.

Table 5.

Table showing Population, Birth-Rates, Death-Rates, Zymotic Death-Rates, Infant and Maternal Mortality Rates of the 20 large towns of England and Wales for 1950.

	Birmingham	Bradford	Bristol	Cardiff	Coventry	Croydon	Kingston upon Hull	Leeds	Leicester	Liverpool	Manchester	Newcastle upon Tyne	Nottingham	Plymouth	Portsmouth	Salford	Sheffield	Southampton	Stoke-on-Trent	Sunderland
R.G.'s estimated population for 1950—																				
(a) civil	1,117,900	294,300	—	244,600	256,800	251,600	—	509,400	—	—	—	—	—	—	—	177,700	515,000	—	275,800	178,100
(b) total		294,300	442,600	244,600	256,800	251,600	302,100	509,700	287,520	803,300	704,500	294,800	307,000	208,960	240,020	177,700	—	180,800	275,800	178,100
Comparability factor :—																				
(a) births	0.97	1.02	0.99	0.97	0.95	0.97	1.01	0.97	0.099	0.97	0.96	0.98	0.98	0.98	0.97	0.96	1.00	1.00	0.97	1.02
(b) deaths	1.13	0.98	0.97	1.07	1.27	0.94	1.15	1.08	1.02	1.20	1.12	1.10	1.09	1.07	1.05	1.15	1.08	1.03	1.22	1.14
Birth rate per 1,000 population—	16.8	16.7	16.03	17.48	17.3	14.3	19.3	15.9	16.73	20.1	17.65	16.80	17.4	16.91	15.22	18.9	14.3	17.83	17.0	19.3
Crude death rate per 1,000 population—	10.9	14.2	11.48	11.59	9.4	10.8	11.5	12.3	11.53	11.6	12.77	13.31	11.1	11.72	10.92	12.9	11.4	11.38	11.4	12.6
Death rate as adjusted by factor—	12.3	13.9	11.14	12.40	11.9	10.1	13.2	13.3	11.73	13.9	14.30	14.64	12.01	12.54	11.47	14.8	12.3	11.72	13.9	14.36
Death rates per 1,000 population from :—																				
Typhoid and Paratyphoid Fever	—	0.00	—	—	0.00	—	0.00	—	—	—	0.001	0.000	—	—	0.00	—	—	—	0.0	0.00
Meningococcal Infection	0.01	0.01	—	0.004	0.00	—	0.00	0.004	0.0034	0.015	0.007	0.014	0.003	0.01	0.01	0.011	0.002	0.011	0.022	0.00
Scarlet Fever	0.00	0.00	—	—	0.00	0.004	0.01	—	—	—	—	0.000	—	—	—	—	—	—	0.0	0.00
Whooping Cough	0.02	0.03	0.005	0.004	0.004	0.004	0.02	0.01	0.0104	0.025	0.03	0.024	0.02	0.01	0.01	0.017	0.016	0.011	0.0	0.006
Diphtheria	0.00	0.00	—	—	0.00	—	—	0.002	—	0.002	0.004	0.000	—	—	—	—	—	—	0.0	0.006
Influenza	0.07	0.08	0.106	0.089	0.12	0.064	0.04	0.04	0.014	0.066	0.09	0.149	0.07	0.05	0.05	0.129	0.045	0.055	0.098	0.12
Measles	0.01	0.01	0.007	0.008	0.008	0.008	0.00	0.004	0.0104	0.005	0.01	0.003	0.01	—	—	0.006	0.004	0.011	0.025	0.01
Acute Poliomyelitis and Encephalitis	0.05	0.02	0.068	0.008	0.011	0.020	0.01	0.02	0.014	0.007	0.007	0.014	0.003	0.01	0.01	—	0.010	0.005	0.018	0.034
Acute Infectious Encephalitis	0.00	0.01	0.007	—	0.00	—	—	—	0.0034	—	0.004	0.010	—	0.005	0.00	0.034	0.006	—	0.007	0.00
Smallpox	—	0.00	—	—	0.00	—	—	—	—	—	—	0.000	—	—	—	—	—	—	0.0	0.00
Diarrhoea (under 2 years)	0.04	0.07	0.0045 0.28*	0.028 1.59*	0.031	0.032	1.7	0.03 1.60†	0.0208	0.052	0.05	0.030	2.6	0.01	0.04	0.118	0.27	0.011	0.033	0.079
Tuberculosis—																				
(a) Pulmonary	0.43	0.31	0.411	0.457	0.47	0.237	0.43	0.35	0.43	0.599	0.58	0.621	0.46	0.52	0.36	0.4	0.313	0.354	0.508	0.505
(b) other forms	0.03	0.06	0.043	0.028	0.06	0.028	0.06	0.03	0.027	0.080	0.07	0.085	0.03	0.07	0.04	0.07	0.054	0.083	0.033	0.067
Cancer (all forms)	1.88	2.25	1.979	1.92	1.60	1.993	1.82	2.08	1.95	1.939	1.99	2.185	1.94	1.82	1.95	2.3	1.940	2.097	2.059	1.858
Infantile mortality rate	30.2	38.0	23.25	27.0	32.6	26.0	34.3	31.0	29.5	37.3	37.87	33.65	31.0	29.43	29.84	43.0	27.8	29.48	43.0	45.0
Neonatal mortality rate	19.2	20.0	15.78	16.78	18.6	17.0	20.08	18.2	18.6	19.6	20.60	20.39	16.9	18.96	18.07	25.9	18.9	22.65	25.0	23.0
Stillbirth rate	23.0	22.3	21.78	24.99	23.0	20.0	24.77	22.74	21.8	22.84	26.08	28.84	19.5	18.88	24.04	23.0	21.0	24.27	26.98	31.0
Maternal mortality rate (per 1,000 total births) from—																				
(a) Sepsis	0.36	0.40	0.00	—	0.00	0.264	0.17	0.12	0.62	0.06	0.08	0.38	0.37	0.277	—	—	—	—	0.00	—
(b) Other causes	0.47	1.00	0.96	—	0.87	0.264	0.50	0.48	0.41	0.36	0.70	0.96	—	0.83	0.53	—	0.531	1.51	0.41	0.28
Total	0.83	1.40	0.96	0.66	0.87	0.528	0.67	0.60	1.03	0.42	0.78	1.34	0.37	1.107	0.53	—	0.531	1.51	0.41	0.28

* Per 1,000 live births.

† Per 1,000 births.

Table 8
INFANT MORTALITY (corrected for transfers). Local Figures

Total 1949	Cause of Death	Total 1950	1st day	to— under 1 week	From 1 to 4 weeks	Total under one Month	Total from 1 to 12 months
1	T.B. respiratory	—					—
—	T.B. meningitis	1					1
—	*Non-meningococcal meningitis	2			2	2	—
1	Acute poliomyelitis	4					4
2	Whooping Cough	2					2
—	Measles	1					1
26	Pneumonia (4 weeks+)	23					23
2	Bronchitis	1					1
—	Bronchiectasis, Ac. Pharyngitis	2					2
4	Gastro-enteritis (1 month to 2 years)	2					2
39	*Congenital malformations	39	12	10	7	29	10
33	*Birth injury	18	10	8		18	—
28	*Atelectasis	16	9	7		16	—
10	*Pneumonia of the new-born	7	1	4	2	7	—
3	*Sepsis of the new-born	3	2	1		3	—
7	*Haemolytic disease of new-born	10	2	6	2	10	—
—	*Haemorrhagic disease of new-born	4	3	1		4	—
28	*Immaturity (unqualified)	20	9	10	1	20	—
8	Other causes	10		2	1	3	7
	{ Totals	165	48	49	15	112	53
192	{ Rate per 1,000 Live Births	23.25	6.76	6.91	2.11	15.78	7.47
	Year 1949. { Totals	192	50	53	30	133	59
	{ Rate per 1,000 Live Births	25.58	6.66	7.06	4.00	17.72	7.86

* Where there has been mention of immaturity—(58 Bristol cases during 1950).

3. PREVALENCE AND CONTROL OF INFECTIOUS AND OTHER DISEASES

Diphtheria

For the fourth successive year there were no deaths from diphtheria but for the first time there were no confirmed cases. This represents the realisation of a long-awaited preventive medicine ideal and a fuller report is given under the section dealing with vaccination and immunisation, but it is noteworthy of comment that only 67.88% of the child population under five have been protected, leaving one-third of the child population still in need of protection.

Scarlet Fever

During 1950 the incidence of scarlet fever reached its highest point for seven years with a total of 821 notifications. After a period of four years there occurred one death from the disease of a non-Bristol resident.

<i>Year</i>	<i>Notifications</i>	<i>Rate per 1,000 population</i>
1950	821	1.86
1949	785	1.78
1948	547	1.26
1947	463	1.08
1946	567	1.36

Poliomyelitis (including polio-encephalitis)

The steep rise in post-war incidence of poliomyelitis throughout the country continued to be reflected by the Bristol notifications during 1950. The 1949 high level of incidence (135 cases) was more than doubled by the 1950 figure of 277 confirmed notifications.

Poliomyelitis in 1950

Confirmed Cases	By Sex	Paralytic	Non-paralytic	Attack rate per 100,000 pop.		Deaths
				1950	1949	
277	155 male	123	32	62.6	30.7	30 (Bristol residents)
	122 female	105	17			

Eleven cases of polio-encephalitis are included.

Poliomyelitis—Confirmed cases 1950. Notifications by quarters

Notifications	1950	1949	1948	1947
1st quarter	4	5	2	1
2nd „	6	2	2	2
3rd „	167	65	15	17
4th „	100	63	10	12
Totals	277	135	29	32

Poliomyelitis—Confirmed cases 1950—By age groups and sex

	Under 5	5+ — 15	15+ — 25	25+	Total
Males	70	55	16	14	155
Females	57	40	10	15	122
Total	127	95	26	29	277
Deaths	9	13	8	—	30

The third quarter remains the period of the highest number of notifications and incidence among the male population is higher than among the female section, both for the paralytic and the non-paralytic variety of the disease. Deaths from the disease, compared with 1949, increased in the ratio of 6:1, there being 30 deaths in 1950 compared with five in 1949, and the attack rate per 100,000 population more than doubled. It is difficult to foresee a reversal in the trend during 1951.

Erysipelas

The incidence remains virtually the same as in the previous three years and remains relatively low except when compared with the 1946 record figures.

1946	1947	1948	1949	1950
82	144	144	135	133

Malaria

The figures for malaria continue to decline with the recession of the effects of the war.

1946	1947	1948	1949	1950
23	8	13	6	4

Dysentery

There were 101 cases notified during the middle weeks of the first quarter which brought the 1950 figure to the highest number of cases notified since 1945.

1945	1946	1947	1948	1949	1950
386	114	83	18	47	154

Most of the cases were of the Sonne type.

Measles

(Attack rate: 6.41 per 1,000 population).

There were 2,837 cases notified during 1950 as compared with 5,513 cases in the post-war peak year. There was a drop of 1,813 cases during 1949 and a further decrease of 863 during 1950. There were three deaths from the disease, all of Bristol residents:

One under 1 year of age
One under 5 years of age
One over 65 years of age

The attack rate per 1,000 population fell from 8.41 in 1949 to 6.41 in 1950.

Notifications	1950	1949	1948	1947	1946	1945
1st quarter	48	2,960	72	1,783	16	2,912
2nd ..	126	447	361	1,813	49	722
3rd ..	441	263	1,355	204	44	67
4th ..	2,222	30	3,725	65	194	23
Totals	2,837	3,700	5,513	3,865	303	3,724
Deaths of Bristol residents	3	4	1	3	—	9

Whooping Cough

There were 3,081 cases notified during 1950, the highest number since notification began in October 1939. Of this total, 1,893 cases were recorded for the months of May to August inclusive. Two deaths occurred in the city, both residents (one male and one female) and both were under one year of age.

Notifications	1950	1949	1948
1st Quarter	409	69	679
2nd ..	1,209	128	637
3rd ..	1,162	63	390
4th ..	301	109	132
Totals	3,081	369	1,838

Year	Notifications	Death of Bristol residents
1950	3,081	2
1949	369	2
1948	1,838 (previous highest No.)	8
1947	747	4
1946	705	4
1945	497	4
1944	917	11

Respiratory Diseases

Deaths of Bristol residents

	1950	1949	1948
Influenza	47	61	9
Bronchitis	245	241	208
Pneumonia	215	211	194
Others	52	57	69

Notifications of acute primary pneumonia and influenzal pneumonia were:

530	1950
447	1949
456	1948
429	1947
519	1946

Acute Rheumatism

Acute rheumatism became notifiable in Bristol on 1st October, 1947. The term "acute rheumatism" for notification purposes means any of the following conditions occurring separately or together in a person under the age of 16 years:

- (a) Rheumatic pains or arthritis accompanied by a rise in temperature;
- (b) Rheumatic chorea;
- (c) Rheumatic carditis;
- (d) Valvular disease of the heart of rheumatic origin.

The following table gives an analysis of the notifications received during 1950:

0—4	5—9	10—14	15+	Total
2	12	17	1	32

Tuberculosis (all forms)

Pulmonary tuberculosis. A total of 495 cases of pulmonary tuberculosis came to the notice of the department during the year, by notification or otherwise. This is 57 less than in the previous year and holds to the average of pre-war years of approximately 500 cases per annum. Deaths from this cause registered in Bristol during 1950 numbered 184 (including eight non-Bristol residents); in 1949 the total was 202 (210 in 1948 and 251 in 1947). The Registrar-General's corrected figures are tabulated below.

Non-pulmonary tuberculosis. Cases of non-pulmonary tuberculosis totalled 63, improving upon the previous year by 20 cases. This is a low-level record. Deaths occurring in the city during 1950 were 25 (including eight non-Bristol residents); in 1949 the total was 32 (47 in 1948 and 56 in 1947).

Pulmonary Tuberculosis					Non-pulmonary Tuberculosis			
Year	Incidence	Attack rate per 1,000 pop.	R.G.'s No. corrected deaths	Death rate per 1,000 pop.	Incidence	Attack rate per 1,000 pop.	R.G.'s No. corrected deaths	Death rate per 1,000 pop.
1950	495	1.12	182	.41	63	.14	19	.04
1949	552	1.26	194	.44	83	.19	23	.05
1948	540	1.24	208	.48	95	.22	30	.07
1947	521	1.22	241	.56	95	.22	35	.08
1946	598	1.44	236	.57	93	.22	30	.07
1945	551	1.33	252	.61	81	.20	54	.13

Food Poisoning

1950—attack rate 0.176 per 1,000 population.

1949—attack rate 2.218 per 1,000 population.

During 1950 there were 15 outbreaks of food poisoning, involving 44 actual cases. In addition, there were a further 39 single cases, making a total of 83 persons who suffered from this disease. The co-operation of medical practitioners in notifying this department of food poisoning cases has been particularly good, the total number notified being 78; the remaining five cases were ascertained during investigations. One case proved fatal, the patient being an elderly man of 70 years of age who had consumed a duck egg which investigation revealed contained a salmonella organism that proved to be the causative agent. In 19 other cases, five of which also involved the consumption of duck eggs, a similar causative agent was discovered.

The total number of cases this year shows a considerable reduction on that of last year when there were 279 cases and, whilst there is no reason for complacency since over 50 per cent. of the persons affected this year were seriously ill, nevertheless it is believed that the appreciable decrease is due in some measure to the clean food campaign which is being pursued by the department.

Notifications—1950

1st Quarter	23
2nd Quarter	17
3rd Quarter	18
4th Quarter	20
Total	78

	<i>Total outbreaks</i>	<i>Total cases</i>
Outbreaks due to identified agents	Nil	Nil
Outbreaks of undiscovered cause	15	44
Single cases	<i>Unknown cause</i>	<i>Total</i>
Agent identified	19	39
20		
(Salmonella)		
Total cases = 83		

II

PERSONAL HEALTH SERVICES

1. Maternity and Child Welfare.
2. External Nursing Services.
3. Dental Health.
4. Mental Health Services.
5. Prevention of Illness, Care and After Care.
6. Health and Tutorial Education.
7. Vaccination and Immunisation.
8. Ambulance Services.

I. MATERNITY AND CHILD WELFARE

By *DR. A. I. ROSS

(*Chief Assistant for Maternity and Child Welfare*)

1. CARE OF MOTHERS AND YOUNG CHILDREN.

Total birth notifications were 420 lower than in 1949 and births in institutions were down by 383. Sixty-two per cent. of births took place in hospital, 8% in private maternity homes; the deliveries in institutions being 70% of the total births.

Municipal ante-natal clinics continue to be allotted a fixed monthly number of maternity bookings for Southmead and Mortimer House Maternity Hospitals. These beds are allotted to clinics according to the number of mothers attending and the figures are revised every six months.

Patients continue to be admitted to hospital for delivery only on medical or social grounds. Reports on social conditions are obtained from municipal midwives and given to doctors at municipal ante-natal clinics, or to the staff of Bristol Maternity Hospital if the patient wishes to be admitted there. 1,175 patients attending our clinics were booked for confinement in hospital on social grounds.

Medical Staff at Clinics

There has been no change in the arrangements for medical staff at clinics.

Clinics

Ante-natal. At the end of the year there were 15 ante-natal centres holding 31 doctor's sessions per week. The number of new patients who attended during the year (4,590) was 662 less than in 1949, being 2,521, and total attendances (32,076) were 1,843 fewer.

Midwives' ante-natal sessions (18 per week—two less than previous year) are held at all centres and the total attendances of 9,355 was 1,220 less than 1949 (10,575).

Consultative ante-natal clinics were held at ten of the above centres with an average of 7½ sessions per week. Attendances at 7,490 showed a decrease of 113 on the previous year (7,603).

There was no change in the number of centres or weekly sessions during the year.

Post-Natal. This work was carried out in nine centres with an average of eight sessions per week. The proportionate increase in use of these facilities reported last year was continued although new patients (2,690) and total attendances (4,413) showed a small decline. The new attendances equalled 58.6% of new ante-natal patients, an increase of 4% over 1949.

Infant Welfare. Two new centres were opened during the year in the Lawrence Weston and Lockleaze areas, bringing the total centres to 33 with an average of 64½ weekly sessions.

Although the number of births in the city continued to fall, the attendances at infant welfare centres were well maintained.

		1950	1949
Children under 1 year	.....	75,133	75,440
Children 1—5 years	.....	28,843	29,769

Attendances of new children under 1 year equalled 86.2% of the births to Bristol residents during the year. Attendance of children over one year at these centres continues to be much too low.

Special Diagnostic Clinic. Although there was an increase of 37 in the

* (Appointed Deputy M.O.H. of Leicester, Nov. 1950).

PREMATURE BIRTHS, 1950.

	AT HOME						NURSING HOMES						HOSPITAL				TOTAL			
	Cases	Trans-ferred to Hosp.	Nursed entirely at Home	Deaths	Alive at one month	Mort-ality %	Cases	Trans-ferred to Hosp.	Nursed entirely in Nursing Homes	Deaths	Alive at one month	Mort-ality %	Cases	Deaths	Alive at one month	Mort-ality %	Cases	Deaths	Alive at one month	Mort-ality %
Under 3 lb.	2	—	2	2	—	100.	2	2	—	1	1	50.	22	17	5	77.3	26	20	6	76.9
3-4 lb.	5	4	1	1	4	20.	7	1	6	2	5	28.6	25	9	16	36.	37	12	25	32.4
4-5½ lb.	67	14	53	6	61	8.9	26	3	23	3	23	15.4	228	15	213	6.6	321	24	297	7.5
Not weighed	—	—	—	—	—	—	—	—	—	—	—	—	38	11	27	28.9	38	11	27	28.9
Total	74	18	56	9	65	12.1	35	6	29	6	29	17.1	313	52	261	16.6	422	67	355	15.9

number of new patients (388), as compared with the previous year, the total attendances (1,264) was less by 336 (1,600 in 1949).

Premature Babies. There were 422 premature births notified during the year, a decrease of four on the previous year, whilst deaths of infants under one month (69) were four fewer than in 1949.

The table on Page 31 shows the place of birth and mortality of premature babies.

The policy of removing premature babies born at home to the appropriate unit at Southmead Hospital was continued. From the table it will be seen that of the babies born at home and in nursing homes, the four under 3lbs., and five of the twelve between 3 and 4lbs., were transferred to hospital. Only seven babies under 4lbs. were born at home compared with 47 in hospitals.

The scheme for the care of premature babies, details of which were given in the report for 1949, was in operation for the whole year and the arrangements worked quite smoothly. During 1950 there were 161 admissions to the Premature Baby Unit at Southmead of which number 16 died. 128 were discharged to their homes for follow-up by the two specially trained health visitors.

The section of the scheme dealing with the domiciliary care of premature babies born at home came into operation on the 17th April, 1950. Three domiciliary midwives each received three months' instruction at the Premature Baby Unit at Southmead Hospital. Two of them have been engaged regularly in the work whilst the third acted as relief. During the period to the end of the year they were responsible for 24 premature babies born at home and for three born at Southmead Hospital and subsequently discharged for home nursing. Six babies were admitted to the Premature Baby Unit after birth at home and of these four were later discharged for domiciliary supervision and one died. Eighteen babies were handed over to district health visitors for normal supervision.

In addition to these Bristol cases the domiciliary midwives were responsible for two cases in the Gloucestershire area. In one case the baby was born in Southmead and discharged to Hanham and the other was born at home in Filton. Both babies were ultimately handed over to the County health visitors for normal supervision.

Residential Convalescence. During the year 56 applications for convalescence were received in respect of mothers and children under five years of age, as follows:

Mother only	.....	1
Mother and one child	.....	11
Mother and two children	.....	26
Mother and three children	.....	10
Mother and four children	.....	2
Children unaccompanied	.....	6

Six of these could not be accepted as they did not comply with the conditions under which the committee could provide convalescent care. In 15 cases the application was cancelled and the remainder received convalescent care.

Ophthalmia Neonatorum. Three cases were notified during the year. None was confirmed gonococcal and all made a complete recovery. In addition 218 notifications of slightly inflamed eyes were received from midwives and health visitors. They followed up these until the eyes were clear.

(2) *Nurseries and Child Minders (Regulation) Act, 1948*

The two applications outstanding at the end of 1949 were dealt with and the applicants were registered for the reception of 16 and five children respectively.

Two new applications were received during the year. In one case the application was withdrawn and the other is being dealt with.

(3) *Children's Act, 1948*

(4) *Residential Nurseries*

(5) *Public Health Act, 1936. Registration of Nursing Homes.*

One new nursing home was registered during the year whilst St. Brenda's Private Hospital, previously registered as a nursing home, was taken over by the Southmead General Hospital Group Management Committee.

The number of nursing homes registered at the end of the year was 20, with accommodation for 61 maternity and 326 other patients.

CO-OPERATION BETWEEN MATERNITY HOSPITALS AND MUNICIPAL ANTE-NATAL CLINICS

1. The Bristol Maternity Hospital of 50 beds admits only those patients who attend the hospital Ante-Natal Clinic.

At a patient's first attendance at this clinic, if there is no medical reason for admission to hospital, the Medical Officer of Health is asked whether or not the patient should be admitted on social grounds. One of the municipal midwives visits the home and her report is checked by the non-medical supervisor of midwives and sent to the hospital. These arrangements were made between the officers of the relevant departments. Patients attend the hospital for post-natal examination.

2. The other maternity hospitals of 35 and 131 beds each were municipal hospitals, and the arrangements that were in force before the appointed day have continued very much the same.

Bristol patients are admitted to these hospitals in three ways:

1. Through Bristol Corporation Ante-Natal Clinics.
2. A few patients attend the hospital consultants for ante-natal care.
3. In emergency patients are admitted whether or not they have attended ante-natal clinics.

The city is allotted a certain number of maternity beds at these hospitals monthly, and the Medical Officer of Health allocates these beds between each of the fifteen municipal clinics according to need.

Requests for admission are made through the Medical Officer of Health to the secretary of the hospital on a special form (copy below), the doctor simply stating medical or social reasons. Admissions for medical reasons are entirely at the discretion of the clinic doctor. A bed for social grounds is usually given only after a domiciliary midwife has given a report.

A certain number of beds are also given for unmarried mothers and these are allocated separately by the Maternity and Child Welfare Officer.

One of our ante-natal clinics held in a local authority clinic in the grounds of the larger of these hospitals is staffed by residents from the hospital. The procedure for admission of patients from this clinic is the same as that given above.

All patients are referred as a routine at the 34th or 36th week, or earlier if necessary, to consultant ante-natal clinics held in the same buildings as the

routine clinics. The consultants work in three teams and a member of the team which will look after the patient in hospital sees her at the consultant clinic. The consultant writes his report on the ordinary ante-natal clinic card. At the 38th week a photostatic copy of the card is sent to the hospital and in due course the Medical Officer of Health receives from the hospital a full report on the delivery, puerperium, and child.

Patients delivered in these hospitals attend post-natal clinics held in municipal clinics.

When one hospital has become either too full or not sufficiently full, booked patients have been transferred to the other hospitals. This has sometimes been arranged by the Chief Assistant Medical Officer of Health (Maternity and Child Welfare) and sometimes by the consultants concerned. Patients who are admitted in emergency for obstetrical reasons always go to one particular hospital.

Appendix

SOUTHMEAD GENERAL HOSPITAL GROUP MANAGEMENT COMMITTEE

Secretary: C. C. HANCOCK, D.P.A., F.I.L.A.

APPLICATION FOR ADMISSION TO.....HOSPITAL

This form was issued on.....

by Dr.
to whom it should be returned
immediately for transmission to
the Hospital.

Enquiries to:

GROUP ADMISSIONS DEPT.,
at SOUTHMEAD HOSPITAL,
WESTBURY-ON-TRYM.
BRISTOL. Tel. 68031.

Full name of patient Date of birth.....

Present address..... M.S.W.....

..... Religion.....

Home address (if different) Nat. Reg. No.....

Full name and address of husband
(or nearest relative) if different.

N.B.—Changes of address must be notified immediately

I hereby apply for admission to Hospital

I agree to conform to the Hospital rules.

Signed (usual signature) Date.....
(of parent or guardian for a child).

Address.....

Occupation or School attending.....

MEDICAL CERTIFICATE

I recommend the admission of the above named patient to.....

Hospital on account of

Admission is desired on or about195.....and is specially
recommended for medical reasons or home conditions as stated overleaf.

Signed.....

Medical Officer

Address or Clinic.....

Medical reasons for admission to Hospital

Special home conditions

OFFICE USE

	Date	
Application received		
Bed booked		
Waiting list		
Admission note issued		
Index		

PLEASE COMPLETE THIS FORM IN BLOCK LETTERS

(II) DOMICILIARY MIDWIFERY SERVICE 1950

(Non-medical Supervisor : Miss Gearing)

Cases Delivered. The number of cases delivered was slightly lower than the previous year, but, with cases returning from hospital (137), the increase in the number of times gas and air was given, and the 28-day visiting, the staff were working at full pressure. The sickness rate was high, being 92 weeks for the year. At one time early in the year, owing to sickness and shortage of staff, three part-time midwives were employed. One is still working in the Avonmouth and Lawrence Weston area.

Cases delivered by midwives as	1948	%	1949	%	1950	%
Midwives	1,826	82.2	1,753	76.7	1,637	74.1
Maternity nurses	395	17.8	523	23.3	571	25.9

Staff. The present position of staff: 35 full-time and one part-time. Two of the staff are doing full-time premature baby work and one is doing part-time premature work. All the staff, except one, are now trained in gas and air analgesia. Miss Spear was appointed Deputy Supervisor and Sister Tutor in February.

Training. During the year, two midwives were trained in the domiciliary care of premature babies. Twenty-seven premature babies have been nursed in their own homes, and visits have been paid up to two months before the baby was handed over to the health visitor. These midwives attended the premature baby follow-up clinic at Southmead Hospital. The scheme has entailed considerable use of transport.

Accommodation of Midwives. We have been allocated one new house on a new estate (Oldbury Court) and the housing of midwives is satisfactory, but that of pupil midwives remains a problem. Seventy-three pupils were received for district training.

Reasons for Non-Use of Gas and Air Analgesia

Reason	Para.		TOTAL	% of Total Deliveries
	1	2+		
1. MEDICAL				
(a) Respiratory Infections	2	14	16	0.72
(b) Pre-clamptic Toxaemia	—	5	5	0.23
(c) Made patient Sick	—	2	2	0.09
(d) Others	—	7	7	0.32
2. Attendance of Midwife extremely short	7	105	112	5.07
3. Not Examined by Dr. for Gas and Air	2	5	7	0.32
4. Not Necessary—easy labour	—	16	16	0.72
5. B.B.A.	4	65	69	3.12
6. Emergency	1	11	12	0.54
7. No help present	—	6	6	0.27
8. Dr. engaged but not present	—	3	3	0.13
9. Arrival of machine delayed, etc.	1	4	5	0.23
10. Insufficient Information why	—	—	—	—
11. Patient refused	5	104	109	4.95
	22	347	369	16.71

(III) DAY AND RESIDENTIAL NURSERIES IN 1950

(1) Day Nurseries (*Inspector of Day Nurseries: Sister Lambert*)

1. The number of Day Nurseries was reduced to 12 during the year, as one was closed in December, 1950.
2. *Grouping of children in Day Nurseries.*
Children admitted to Day Nurseries are now placed in three categories:
Group 1 Short stay—admitted for reasons of emergency in the home.
Group 2 Public Health long term—e.g. children of mothers who are the sole support of the home.
Group 3 Children of mothers who wish to supplement income. These are only admitted when the income of the home is so low as to cause hardship. The parents are required to fill in a form of income and expenditure before arrangements are made for the admission of the child.
3. *Nursery Fees*
As from the 31st July, 1950, the Health Committee approved the increase of nursery fees. The charge is now 3/- per day. Assessment is available if parents cannot afford full payment.
4. *Student Nursery Nurses (Health Committee)*
Nursery Nurses examination. There were three candidates for the examination in 1950, two of whom were successful in gaining their diploma. We also received, from nursery schools, 34 students for periods of three months to gain experience with children under two years of age.
5. *Paragon Day Nursery.*
This nursery closed on 31st December, 1950. Attendance had been poor and the waiting list nil. Children attending at time of closing were given vacancies in other nurseries.
6. *Staff.*

12 Sisters-in-Charge	{	9 State Registered Nurses
	{	2 State Enrolled Assistant Nurses
10 Deputy Sisters	{	1 Trained Nursery Nurse
19 Staff Nurses	{	Trained Nursery Nurses
36 Nursery Assistants	{	Trained Nursery Nurses
9 Students	{	Unqualified staff
11 Wardens and 1 Relief Warden	{	Health Committee

(2) Residential Nurseries

Babies' Home, Downend

(*Medical Supervisor: Dr. Greta Hartley*)

During 1950 there were considerably fewer admissions than in 1949 as the scheme to use the nursery as a "reception centre" for children under five was abandoned, and there were less transfers to other nurseries. A number of children were, however, boarded out and two were adopted, the remainder staying for long periods.

The health of the children was good during the first eight months of the year and then the resignation of the matron and deputy matron resulted in several changes of senior staff with its inevitable reactions on the children,

coinciding also with an epidemic of infective Hepatitis among the staff. There was some increase of illness during the latter part of the year, with three children requiring transfer to hospital:

1 with Pneumococcal Meningitis to Ham Green Hospital

1 with Enteritis to Ham Green Hospital

1 with Otitis-Adenitis to Southmead Hospital

All these children made good recoveries.

An epidemic of Sonne Dysentery involved staff and children in the spring and, at the end of the year, 50% of the children succumbed to a moderate type of influenza, but all recovered without complications. One child had whooping cough.

Frenchay Lodge, Nore House and Greenhill House Residential Nurseries

(Medical Supervisor: Dr. Alison Craig).

During 1950, in spite of the extremely poor weather throughout the year, the general health of the "long-stay" children in the three nurseries was good, until towards the winter months when chesty colds and minor nursery infection occurred—probably as the result of insufficient sunshine and out-of-door life during the summer. Several new children admitted during the year from unsatisfactory home conditions have been in a poor state of nutrition and have required extra supervision and care.

At Frenchay Lodge, one case of German measles and 11 cases of measles occurred. At Nore House, there were 10 cases of chickenpox. As these were all mild infections and accommodation at Ham Green was limited, the children were kept in the nursery and all made very good recoveries.

From Nore House, one child was admitted to Ham Green with poliomyelitis, but made a good recovery with no residual paralysis. Another child was admitted to the Bristol Royal Infirmary for opening of a cervical abscess.

The children attending the infant and nursery schools have made good developmental progress.

(IV) UNMARRIED MOTHERS' WELFARE*(Welfare Officer: Mrs. N. H. Stott)***Applications**

During the year, 272 applications were received in respect of an illegitimate child and mother. Of these applications for assistance it is interesting to consider the age groups from which these applications were received:

16-17	18-21	21 + -30	Over 30	All ages
26	68	125	53	272

Of these:

192 cases were in respect of a first illegitimate child;

44 cases were in respect of a second illegitimate child;

27 cases were in respect of a third illegitimate child.

In this last group there are many who are co-habiting—one or the other of the parties not being free to marry. There have also been a number in similar circumstances expecting a fourth illegitimate child.

So often an early marriage, with no serious consideration for the future, results in an early break-down of the marriage, with consequent disastrous results to children and family life. At the end of 1949 there were 68 cases outstanding where the child had not been born, making a total of 340 cases to be dealt with. The following were the results:

	1950	1949
Admitted to hospital for confinement	213	244
Admitted to Hospital immediately after the birth of the child.....	6	3
Born at Mother and Baby Homes '.....	14	22
Born at Private Nursing Homes	2	—
Home confinement	23	20
Assistance in confinement not sought	18	48
Applications withdrawn (left area)	4	11
Child not yet born	60	68
	<hr/> 340	<hr/> 416

Financial Help

Ninety-nine girls were admitted to homes during the year. This is a rather lower percentage of the total cases helped than in previous years.

The greater financial help available through Maternity Benefits under National Insurance, and by National Assistance, make it possible for more girls to remain in their own homes during late pregnancy and on discharge from hospital following confinement. Wherever home circumstances are satisfactory this is the best arrangement for mother and child and nearly always leads to the child remaining in the home and so becoming a unit of the family.

Mother and Baby Homes

It is the girls who need the help of Mother and Baby Homes who are the greatest concern in the matter of re-habilitation.

A certain number do in fact return home with baby, but many more are unable to do so, or have no home. It is on behalf of these girls we plead again for a hostel for mothers and babies. Such a hostel is the necessary complement to the Mother and Baby Home, the work of which is, at present, so often rendered useless, because the ultimate separation of mother and child is inevitable when discharge from the home is necessary. When this is so a mother frequently feels that any previous help to keep her with her baby has been foolish, if not cruel, and is often so described by the mother.

Affiliation Work

The following is an analysis of affiliation work. At the end of 1949, 226 cases were incomplete, to which must be added: 272 applications received during the year, a total of 498.

	1950	1949
Affiliation Orders obtained	36	37
Agreements	50	63
Information laid	10	15
Payments made direct to girl	10	8
Child adopted	32	38
Married to putative father	54	54
Co-habiting	36	39
Married to another man	3	12
Putative father not known	4	1
Returned to live with husband	1	3
No action possible:		
(1) Stillbirth, Abortion, Child died	24	39
(2) Girl certified Mental Defective	3	4
Girl refused to take action	6	4
No corroboration	29	41
Left area	15	28
Putative father left country (returned to Germany)	1	—
Incomplete	184	226
	<hr/> 498	<hr/> 646

After-care Work

Considerable time is given to this work and is of the greatest importance. In co-operation with the employment exchanges every effort is made to obtain suitable work at a wage which enables the mother to meet her responsibilities without constant stress.

Many girls prove restless and generally unstable for a long period after the birth of a child. It is obvious that they are yearning for a home of their own, and many difficulties have to be overcome before the girl is really on her feet.

One evening each week is spent in the office to meet those who are unable to call during normal hours.

Help is continued over payments due to mothers. This forms an invaluable link in after-care work and is greatly appreciated by the mothers.

Financial Assistance

During the year 294 cases were helped in application for arrears of payments or for the varying of an existing Order.

The sum of £11,652 12s. 7d. was dealt with during the year. Of this: £361 6s. 1d. was received in respect of maintenance in Mother and Baby Homes.

£999 11s. 10d. was received from mothers and putative fathers in respect of maintenance of children in various nurseries.

£10,291 14s. 8d. was received and paid to or on behalf of the individual concerned.

£11,652 12s. 7d.

Matrimonial Cases

The chief work in this sphere is that of reconciliation. Except where the parties had separated, and later returned to live together, it is difficult to judge where reconciliation has been effected.

In many cases frequent help and advice is needed over a long period. It is clear from many interviews that in a large percentage of cases the housing situation is the root cause of the trouble, particularly with young couples who have no home of their own, or are living with "in-laws." This is aggravated when there is a child. So often the husband, with no fireside of his own, spends most of his free time as if he was single.

Seventy-three matrimonial cases were referred to the office during the year. A number of these needed help in enforcing payments or obtaining increases in existing Orders, and six fresh Orders were obtained.

(V) STERILITY CLINICS

Male Sub-Fertility Clinic

(Dr. R. Irving-Bell)

There are still only two sessions per week allowed for this work which comprises:

- (a) the investigation of male sub-fertility (childlessness in the wife);
- (b) pre-marital examinations and instruction;
- (c) examination of sexual disabilities in the male, complicating marriage.

As medical examination and instruction before marriage are considered to be of supreme importance in the field of preventive medicine and 17% of the year's new cases were referred (by medical practitioners and the Marriage Guidance Centre) for this very purpose, it is a little disappointing to find that an extension of the work (i.e. further sessions) has not, as yet, been granted by the Health Authority.

Appointments are made and are booked a full four weeks ahead and are mainly made through the Marriage Guidance Centre, general practitioners or the medical officer in charge of the female sterility clinic. In 1950 10% (approximately) more new cases were seen, and, as these require a more complete examination, the total number of cases that can be seen in two sessions is further limited. Fewer old cases were therefore seen in 1950 than in 1949.

The knowledge of these limiting factors and of the waiting list further influences reference of cases to the clinic.

During 1950, the number of new cases seen was 145 (143 in 1949). The total attendance was 321 (351 in 1949).

It has been pointed out in previous annual reports that this clinic deals with a variety of conditions before and after marriage, requiring medical diagnosis and treatment, and provision for such service is being increasingly demanded by the public and the general practitioner.

Female Sterility Clinic, 1950

(Dr. Boxall)

The number of pregnancies confirmed was 21. Of these 11 attended this clinic only, and 10 in conjunction with the Bristol General Hospital, where investigations of a more complicated nature than can be undertaken in a clinic were completed. The number of pregnancies achieved is encouraging: as some occurred after two years' treatment an effort is being made to encourage still further the continued attendance of each patient for treatment.

At the beginning of the year, owing to extra sessions held in 1949, the waiting list for new cases had been reduced to reasonable proportions and this was maintained throughout the year. Now new cases can be seen almost at once.

The Marriage Guidance Council continues to ask us to see cases for premarital examination and for physical marriage difficulties other than sterility. When time allows these cases are seen, but a special session seems to be required to deal with them.

Total number of cases seen	.....	.....	360
New consultations	.....	.....	67
Old patients	.....	.....	293

Of these new cases, 19 were referred by the family doctor;

23 were referred by the doctor or health visitor at a clinic;

16 were referred by an old patient or a friend;

1 was referred by Dr. Irving Bell;

3 were referred by the Marriage Guidance Council;

5 were referred by others.

(VI) MATERNAL MORTALITY IN BRISTOL

Dr. Ross, Chief Assistant Medical Officer for Maternity and Child Welfare, in an article in the "Medical Officer," has made an assessment of the value of local authority ante-natal clinics in Bristol during the years 1937-1949. He points out that the Royal College of Obstetricians and Gynaecologists in their 1944 report on a National Maternity Service, criticised adversely the value of local authority ante-natal clinics on the grounds that their responsibility for ante-natal care was completely divorced from the management of labour. The Royal College went on to say that one of the causes of maternal mortality, namely toxæmia of pregnancy, should be reducable by efficient ante-natal care.

In consequence, Dr. Ross calculated the Maternal Mortality Rate in-patients attending or not attending local authority clinics and analysed the causes of maternal mortality in Bristol for the years 1937-1949 and then calculated the reduction in the number of deaths due to toxæmia in pregnancy.

He found that during these years in Bristol,

- (i) the overall maternal mortality rate (excluding abortion) was 1.63 per thousand;
- (ii) the maternal mortality rate (excluding abortion) for Bristol residents who did not attend local authority clinics was 2.76 per thousand;
- (iii) the maternal mortality rate of patients who passed through local authority clinics was .97 per thousand.

With regard to toxæmia of pregnancy, while during this period the mortality rate from toxæmia of pregnancy of those patients who attended municipal ante-natal clinics was only 0.35 per thousand, the overall mortality from toxæmia of pregnancy was 0.53 per thousand.

It is therefore abundantly clear that patients who have attended local authority clinics during this period have had a much lower mortality rate not only from the general point of view but also from the point of view of toxæmia of pregnancy and, in his opinion, on these grounds alone, local authority clinics have been amply justified.

Dr. Ross concluded his article by pointing out that under the National Health Service Act there might still be a tendency for the local authority ante-natal clinics to disappear. This, in view of his findings, might well lead to tragic consequences. He suggests that in order to prevent this from happening, in future general practitioners should be encouraged to come and see their own patients in local authority clinics where they can have the advantage of all the ancillary services and where the valuable educative work of the local authority clinic would still be continued. This, in his opinion, would be anticipating the ultimate use to which health centres will be put if and when they are built.

(VII) STATISTICS

CLINICS.

Table 1—Maternity and Child Welfare.

1949		1950
	(a) <i>Notifications—</i>	
8,328	Live Births (including 515 premature births) ...	7,832
216	Still Births ...	192
40	Confinements at Home—by Doctor ...	32
2,377	by Midwife ...	2,227
22	Premature Births admitted to Hospital (included above) ...	14
6,026	Confinements at Institutions ...	5,643
	(b) (i) <i>Municipal Midwives—</i>	
1,753	Cases completed as (a) Midwife ...	1,637
532	(b) Maternity Nurse ...	571
24,495	Nursing Visits ...	28,123
24,018	Other Visits ...	22,231
1,625	Attendances at Ante-natal Clinics ...	1,713
	(ii) <i>Pupil Midwives—</i>	
1,268	Cases completed as Midwife ...	1,127
21,653	Nursing Visits ...	17,869
7,964	Other Visits ...	8,047
878	Attendances at Ante-natal Clinics ...	882
	(iii) <i>Medical Students—District Midwifery—</i>	
112	Cases attended ...	143
	(c) <i>Attendances at Clinics—</i>	
	(i) <i>Municipal Ante-natal (Medical Officers Sessions).</i>	
3,237	Verrier Road ...	3,025
2,942	Bedminster ...	1,701
921	Rochester Road ...	623
1,117	Brislington (Water Lane) ...	894
2,639	Knowle West ...	2,302
4,824	North Bristol ...	4,634
1,403	Portway ...	1,593
2,810	Central ...	2,508
3,078	South Bristol ...	3,477
3,458	Southmead ...	3,677
3,363	Speedwell ...	2,887
2,697	Clifton ...	2,404
442	Frenchay ...	461
620	Dovercourt Road ...	704
418	Inns Court Road ...	1,186
33,969		32,076
21.9	Average per session ...	20.6
5,252	New Patients ...	4,590
	(ii) <i>Municipal Ante-natal (Midwives Sessions)—</i>	
1,055	Verrier Road ...	978
960	Bedminster ...	435
493	Rochester Road ...	353
240	Brislington (Water Lane) ...	248
883	Knowle West ...	827
1,520	North Bristol ...	1,196
599	Portway ...	623
351	Central ...	379
1,254	South Bristol ...	1,040
1,360	Southmead ...	1,077
761	Speedwell ...	615
165	Clifton ...	190
234	Frenchay ...	195
337	Dovercourt Road ...	374
363	Inns Court Road ...	825
10,575		9,355
13.2	Average per session ...	11.8
100	New Patients ...	111
	(iii) <i>Post natal Clinics—</i>	
954	Central ...	958
500	Bedminster ...	315
499	Speedwell ...	471
859	Southmead ...	808
175	Portway ...	146
559	Knowle ...	527
305	Clifton ...	319
449	Bristol South ...	351
385	Verrier Road ...	380
125	Frenchay ...	138
4,810		4,413
13.5	Average per session ...	12.5
2,868	New Patients ...	2,690

Maternity and Child Welfare—continued.

1949		1950
	(iv) <i>Consultative Ante-natal Clinics—</i>	
885	Central	877
968	Bedminster	813
459	Speedwell	341
1,937	Southmead	2,143
295	Portway	319
554	Knowle	511
560	Bristol South	606
1,022	Bristol North	922
607	Verrier Road	583
316	Clifton Health Centre	375
<hr/> 7,603		<hr/> 7,490
17.6	Average per session	17.4
2,168	New Patients	1,949
	(v) <i>Municipal Infant Welfare Centres—</i>	
	Mothers—	
5,157	Central	4,719
7,403	Speedwell	6,250
6,060	Southmead	4,836
3,632	Portway	3,144
8,432	Knowle West	6,679
6,987	South Bristol	7,274
4,809	Bedminster	4,365
2,936	Barton Hill	1,845
1,339	Headley Park	1,132
2,738	Moorfields	2,462
1,503	Brislington (Salisbury Road)	1,317
3,835	Clifton	3,682
5,474	North Bristol	5,728
5,688	Brynland Avenue	5,763
1,220	Avonmouth	1,194
2,567	Brislington (Water Lane)	2,797
1,437	Rochester Road	1,343
1,024	Frenchay	884
2,318	Bedminster Down	2,147
6,256	Durdham Down	5,812
2,242	Eastville	2,475
1,696	Hotwells	1,652
5,464	Newry Walk	4,399
1,134	Redcliffe	1,497
1,863	Sea Mills	1,764
1,873	Westbury	1,677
1,840	Dovercourt Road & Lockleaze	2,188
1,262	Fishponds (Guinea Lane)	1,939
10	St. George (Verrier Road)	1,821
601	Inns Court Road	1,785
179	Ullswater Road	1,571
—	Lawrence Weston	396
<hr/> 98,979		<hr/> 96,537
33.3	Average attendance per session	31.8
	Children under 1 year—	
3,418	Central	3,353
5,959	Speedwell	4,649
4,394	Southmead	3,675
2,718	Portway	2,125
5,816	Knowle West	4,926
5,736	South Bristol	5,925
3,828	Bedminster	3,595
2,470	Barton Hill	1,369
990	Headley Park	850
2,367	Moorfields	1,875
1,225	Brislington (Salisbury Road)	1,152
3,098	Clifton	2,921
4,809	North Bristol	5,100
4,552	Brynland Avenue	4,850
2,010	Brislington (Water Lane)	2,365
857	Avonmouth	1,045
1,285	Rochester Road	1,186
593	Frenchay	491
1,585	Bedminster Down	1,518
4,523	Durdham Down	4,360
1,758	Eastville	2,062
1,284	Hotwells	1,158
3,625	Newry Walk	2,836
749	Redcliffe	983
1,349	Sea Mills	1,256
1,333	Westbury	1,185
1,390	Dovercourt Road & Lockleaze	1,762
1,047	Fishponds (Guinea Lane)	1,677
8	St. George (Verrier Road)	1,662
517	Inns Court Road	1,605
147	Ullswater Road	1,317
—	Lawrence Weston	300
<hr/> 75,440		<hr/> 75,133
25.3	Average attendance per session	24.2

Maternity and Child Welfare—continued.

1949		1950
	<i>Municipal Infant Welfare Centres (contd.).—</i>	
	Children between 1 and 5 years—	
1,809	Central	1,555
1,563	Speedwell	1,584
2,043	Southmead	1,659
1,635	Portway	1,699
3,097	Knowle West	2,196
1,686	South Bristol	1,849
1,180	Bedminster	999
510	Barton Hill	483
447	Headley Park	409
381	Moorfields	618
395	Brislington (Salisbury Road)	334
1,071	Clifton	1,069
767	North Bristol	773
1,582	Brynland Avenue	1,257
742	Brislington (Water Lane)	673
532	Avonmouth	438
278	Rochester Road	304
615	Frenchay	604
965	Bedminster Down	974
2,140	Durdham Down	2,060
513	Eastville	480
499	Hotwells	639
2,316	Newry Walk	2,185
453	Redcliffe	575
666	Sea Mills	611
711	Westbury	587
703	Dovercourt Road & Lockleaze	669
265	Fishponds (Guinea Lane)	325
2	St. George (Verrier Road)	191
153	Inns Court Road	392
50	Ullswater Road	438
—	Lawrence Weston	214
29,769		28,843
10.0	Average attendance per session	9.3
	New Patients—	
6,527	Children under 1 year	6,017
1,112	Children between 1 and 5 years	1,018
417	(vi) <i>Birth Control</i> —	
	Attendances	484
2,427	(vii) <i>Minor Ailments</i> —	
6,884	Inspection	2,143
1,577	Treatment	7,038
2,818	New Patients—Inspected	1,314
	Treated	2,486
400	Ante and Post Natal Exercises	1,236
92	New Patients	301
407	(viii) <i>Sterility Clinic</i> —	
93	Attendances	369
	New Patients	65
205	<i>Backward Children</i> —	
18	Attendances	220
	New Patients	10
1,600	<i>Special Diagnostic Clinic</i> —	
351	Attendances	1,264
	New Patients	388
	(d) <i>Health Visitors</i> —	
	Visits—	
774	Ante-natal	1,041
6,391	Primary	6,642
25,589	Under one year	27,664
58,319	1—5 years	55,370
972	Eye cases	972
32	Ophthalmia Neonatorum	41
1	Summer Diarrhoea	2
46	Neo-natal deaths	28
5,943	Other special visits	6,770
19,327	Blank visits	17,783
124	Tuberculosis	5
38	Tuberculosis—Blank visits	—
365	Unmarried mothers	350
	Sessions attended—	
9,908	Clinics	8,835
2,348	Nursery schools and classes (hours)	2,178

Maternity and Child Welfare—continued.

1949		1950
	(e) <i>Inspector of Midwives and Nursing Homes—</i>	
	Visits—	
	1. Midwives Acts—	
103	Routine	97
510	Special	441
—	2. Home Helps	156
160	3. Blank visits	158
17	4. Nursing Homes (Routine)	—
43	5. Nursing Homes (Special)	3
380	6. Midwives cases	524
	(f) <i>C.M.B. Forms—</i>	
664	A. Medical Help	597
3	B. Death	6
18	C. Stillbirth	21
15	D. Laying out the dead	15
6	E. Liability of infection	7
214	F. Artificial feeding	222

Table 2—Maternity and Child Welfare.—Welfare Department.

1949		1950
No.		No.
2,406	Cases on Register at beginning of year	2,754
419	„ added	345
71	„ removed	128
2,754	„ on Register at end of year	2,971
	Applications received—	
341	(a) Unmarried mothers	272
78	(b) Married women	73
	Affiliation Cases completed—	
37	(a) Orders obtained	36
63	(b) Agreements arranged	40
21	Maintenance Orders (Married Women)	6
255	Assisted in application for arrears on Orders	294
	Admitted to homes—	
76	(a) Expectant mothers	48
61	(b) Mothers with babies	51
	Visits—Domiciliary—	
618	(a) Ordinary	720
886	(b) After care	978
346	Blank visits	369
882	Interviewed in hospital or homes	859
£10,871	Total Receipts	£11,653
£10,876	„ Disbursements	£11,694

Table 3—Sunlight Treatment.

1949	Central Clinic							1950
	<i>Artificial sunlight—</i>							
	<i>New patients—</i>							
16	Adults	...	...	...	...	...	...	29
532	Schoolchildren	...	...	...	...	...	...	786
552	Pre-schoolchildren	...	...	...	...	...	...	663
	<i>Treatments—</i>							
149	Adults	...	...	...	...	...	...	186
5,831	Schoolchildren	...	...	...	...	...	...	8,270
8,935	Pre-schoolchildren	...	...	...	...	...	...	6,964

Table 4—Eye Clinics.

1949						1950	
New Patients	Attendances					New Patients	Attendances
1,209	6,992	School	Children	...	...	1,382	7,591
109	679	Infants	...	...	...	86	612
—	—	Adults	...	...	...	—	—
1,318	7,671					1,468	8,203

Table 5—Orthopædic Department.

1949						1950	
Patients	Attendances					Patients	Attendances
319	456	Inspections :—				227	320
1,105	1,564	M. & C. W.	...	...	...	868	1,261
		School	...	...	...
1,424	2,020	Totals ...				1,095	1,581
		Treatment :—					
94	1,865	M. & C. W.	...	...	...	110	2,365
315	3,852	School	...	...	...	306	3,966
409	5,717	Totals ...				416	6,331

Table 6—Foot Clinic.

1949						1950	
Patients	Attendances					Patients	Attendances
16	49	M. & C. W.	...	...	...	9	25
773	3,297	School	...	...	...	647	3,244
789	3,346	Totals ...				656	3,269

Table 7—Ear, Nose and Throat Department.

1949				1950	
Patients	Attendances			Patients	Attendances
195	254	Inspections :— M. & C. W. School		84	114
2,165	3,583			1,218	1,886
2,360	3,837		Totals ...	1,302	2,000
11	54	Treatment :— M. & C. W. School		15	127
344	6,960			230	5,235
355	7,014		Totals ...	245	5,362

Table 8—X-Ray Department.

1949				1950		
Film	Screen	Total		Film	Screen	Total
5,518	4,497	10,015	<i>Central Health Clinic</i>	7,487	4,189	11,676
3,193	—	3,193	Chest	2,434	—	2,434
1,721	—	1,721	" G.P.'s	2,012	—	2,012
515	—	515	Schools	471	—	471
2,737	—	2,737	M. & C. W.	2,701	—	2,701
			Others			
13,684	4,497	18,181	Totals ...	15,105	4,189	19,294

Table 9—Scabies Baths.

	Central Health Clinic		Southmead		Feeder Road		Totals	
	1949	1950	1949	1950	1949	1950	1949	1950
Children	380	244	66	178	4	3	450	425
Infants	144	95	45	64	—	—	189	159
Adults								
Females	218	136	28	31	—	—	246	167
Males	—	—	—	—	178	123	178	123
Total Attendances	742	475	139	273	182	126	1,063	874
† New Patients—								
Children	196	126	26	83	2	2	224	211
Infants	80	56	20	33	—	—	100	89
Adults								
Females	116	75	17	18	—	—	133	93
Males	—	—	—	—	94	68	94	68
Total New Patients	392	257	63	134	96	70	551	461

In addition to the above, 16 patients involving 29 attendances were dealt with for adjacent authorities.

† Included in "Total Attendances."

Table 10—Dispensary.

(1) Establishments served—								1950
Central Health Clinic								
Health Centres and Clinics (38)								
Hospitals and Institutions (2)								
Day Nurseries, Special Nursery								
Schools and Classes (72)								
Municipal Midwives (50)								
School first aid sets (523)								
Gas and air apparatus servicing (1807)								
(2) Turnover of Drugs, Dressings, etc.—								
Quantity of mixtures made	...	...	...	gallons	...	...	...	977
" ointment made	...	...	...	lbs.	...	...	...	793
Vit. A. & D. Emulsion	...	...	...	gallons	...	...	...	112
Vit. A. & D. Capsules	...	...	...	caps.	...	...	...	145,000
Whooping Cough Vaccine	...	...	...	cc	...	...	...	70
P.T.A.P. Diph. Proph. (5 cc vials)	...	...	...	cc	...	...	...	6,960
Other Medicines dispensed	...	...	...	gallons	...	...	...	346
Powders	...	...	...	lbs.	...	...	...	138
Lint and Cotton Wool	...	...	...	lbs.	...	...	...	2,855
(3) Bulk purchase of Drugs—				lbs.	...	...	...	4,069
				gallons	...	...	...	137
				tabs.	...	...	...	1,539,000

Table 11—Diphtheria Immunisation.

1949		1950
	<i>Diphtheria</i> —Number of immunisations completed at Schools, Clinics and Nurseries, General Practitioners during the year.	
5,243	Full course—Ages 0—5 years	4,235
869	Ages 5—15 years	282
4,088	Booster dose —15 years	1,947

Table 12—Day Nurseries.

No. on Register 31.12.49	No.	Places Provided 31.12.50	No. added to Register	No. Removed from Register	No. of Deaths	No. on Register 31.12.50	Waiting List
571	13	520	479	586	—	464	63

Table 13—Home Helps.

1949		1950
	Total cases helped—	
365	(a) Maternity	360
425	(b) Sickness	497
	Total days helped—	
4,017	(a) Maternity	3,955
5,809	(b) Sickness	7,733

2. THE EXTERNAL NURSING SERVICES IN 1950

Miss L. M. Bendall (Matron, External Nursing Services)

In Bristol, the responsibility for co-ordinating the work of the nursing services is delegated to the Matron of the External Nursing Services.

These services can be classified as follows:

- (1). Health Visiting Service.
- (2). Domiciliary Midwifery Service.
- (3). Domestic Help Service.
- (4). Day Nurseries.
- (5). Tutorial Section.
- (6). Other clinic staff; e.g. Clinic Nurses, Physiotherapists, dental attendants, adult helpers and clinic assistants.

(Note.—The Home Nursing Service is provided by the Bristol District Nursing Association on behalf of the local health authority and a separate report of this is submitted by Miss Dixon, Nursing Superintendent.)

(1) HEALTH VISITING SERVICE

There is still an overall shortage of health visitors throughout the country, though the position in Bristol has altered very little from that of the preceding year. The staffing position at the end of 1950 was as follows:

Establishment

- 51 Full-time health visitors.
- 8 Part-time health visitors.
- 8 Temporary health visitors under contract.

Of these, eight are clinic sisters, and four carry out duties of a specialised nature, e.g. home visitation of infectious diseases, welfare of the blind, premature baby visiting and the care of old people.

Appointments numbered 17 including:

- 8 Student health visitors who passed their examination in March, 1950, and became temporary health visitors under contract until March 1951.
- 6 Full-time health visitors.
- 3 Part-time health visitors.

Resignations numbered 17 including 16 full-time health visitors and one part-time health visitor.

Causes of resignation:

- 1 Marriage.
- 2 Pregnancy.
- 3 Retirements.
- 1 To return to hospital.
- 3 On leaving the country.
- 7 To take other posts.

During the year 1950 the health visitors have maintained their high standard of work. It should be realised that the character of their work is slowly but imperceptibly changing. Gone are the days when the health visitor was the "baby" nurse, going into the home to advise the mother on the care and general management of the baby and young child. The health visitor must now be regarded as the medico-social worker who visits the family as a unit advising on the care of the young child, also giving advice on the prevention of disease and to persons suffering from illness. It has been somewhat difficult to get this new conception of health visiting over to established health visitors, but the new generation regards it as an accepted fact.

The duties of the health visitor (not forgetting that she is also the school nurse) are divided into two:

1. Work in clinics, nursery schools and classes.
2. Home visitation.

Work in Clinics

The health visitors have been completely relieved of routine duties in clinics: such duties now being carried out by State Registered Nurses. This leaves the health visitors free to concentrate on health education to mothers, individually or in groups, and to carry out surveys. The health visitor still takes the responsibility of clinic administration.

During 1950 the health visitors have taken part in the giving of demonstrations in ante-natal clinics and it is expected that this work will expand as time goes on. Two health visitors visited St. David's Hospital, Cardiff, in October to observe their method of stimulating lactation in expectant mothers. On their return they started two lactation clinics and it is hoped during the next few months to have these clinics in operation all over the city. This should substantially increase the numbers of mothers able to breast feed their infants.

Home Visitation

It cannot be too strongly emphasised that home visiting is the foundation of the health visitors' work and it is a matter of extreme satisfaction that she has been freed from routine clinic duties to pursue this side of her work.

The number of home visits carried out by health visitors in 1950 was 126,837 against 117,926 the preceding year.

They may be classified as follows:

Maternity and Child Welfare, i.e. visiting in connection with the expectant and nursing mother, and children under five years							116,668
T.B. visits	.....	.....	.....	.....	.....	.....	8,586
Special visits (other than M. & C.W. and T.B.)	.....	.....	.....	.....	.....	.....	1,583
Total							126,837

It will be seen that the number of Maternity and Child Welfare visits still far outnumber those of other categories. The health visitor still visits every baby a fortnight after birth, and thereafter visits as required. The new baby is the "handle" by which the health visitor gains admission to the home.

The important work of T.B. home visiting was taken over by the health visitors in May, 1950. They have enabled the register of cases to be brought up to date by their routine follow-up of patients, appointments have been made for old cases and contacts to be examined and welfare visits have been paid in connection with housing and bedding, etc.

The special visits paid by health visitors include visiting in connection with old people, housing, overcrowding, follow-up of cancer cases for the cancer research board, and other miscellaneous visits. One health visitor specialises in old people's welfare, using her influence with relatives, provision of home helps and admission to hospitals where desirable.

It will be seen that there was an increase of 8,911 visits paid by health visitors on the preceding year's figures and this, in spite of the fact that there are fewer health visitors, can be attributed to the staff of clinic nurses which has been built up to take the weight of routine clinic work. The number of Maternity and Child Welfare sessions being covered approximated 115 per week, which effected a saving of 10½ health visitors' time.

A report on the work of the health visitor would not be complete without mentioning the valuable work she does in connection with the carrying

out of surveys and her co-operation in the training of health visitors, doctors and other students.

Refresher Courses

A local refresher course of a week's duration was arranged in October, 1950. This was very much enjoyed by twenty of the health visitors and it is hoped that a similar course will be arranged in 1951. Two health visitors attended a course in London under the auspices of the W.P.H.O.A.

2. DOMICILIARY MIDWIFERY SERVICE

See report by Miss Gearing, Non-medical Supervisor of Midwives.

3. DOMESTIC HELP SERVICE

See report by Miss Walton, Home Help Organiser.

4. DAY NURSERIES

See report by Miss Lambert, Supervisor of Day Nurseries.

5. TUTORIAL SECTION

See report by Miss Gibb, Sister Tutor.

6. OTHER CLINIC STAFF

Clinic Nurses

As already mentioned, these are State Registered Nurses who carry out routine duties in clinics which can be done by State Registered Nurses without their Health Visitors certificate.

Physiotherapists

A staff of three physiotherapists has been maintained during the year. They are fully engaged in orthopaedic work and sunlight treatment. In addition a series of relaxation classes and exercises have been carried out for the benefit of expectant and nursing mothers.

Dental Attendants

An establishment of twelve dental attendants has been maintained during 1950.

Adult Helpers

An establishment of eight adult helpers has been maintained during the year. They are employed in the treatment of verminous heads, scabies, and any such other clinic duties as may be necessary.

Clinic Assistants

These are girls between the ages of 16 and 18 years who are desirous of entering the nursing profession. They work in various departments of health centres and also attend lectures. There was a decrease in the number of clinic assistants appointed during 1950, probably because many hospitals now have their own scheme for filling in the gap until girls are old enough to train.

During 1950 there were 15 appointments and there were 32 resignations. Out of this number:

- 26 commenced hospital training.
- 1 commenced physiotherapy training.
- 1 gave up nursing for financial reasons.
- 1 to take up dental appointment.
- 1 to become a Nursing Cadet in a hospital.
- 2 unsuitable for training.

(II) THE HOME NURSING SERVICE IN 1950

Miss N. M. Dixon (Senior Superintendent, Bristol Home Nursing Service).

In Bristol the Home Nursing Service is provided by the Bristol District Nursing Association on behalf of the Local Health Authority.

1. Nursing Staff

The approximate number of nurses employed regularly throughout the year was as follows:

Queen's Nursing Sisters	.....	.....	.....	.....	38
Male Queen's Nurses	.....	.....	.....	.....	5
State Registered Nurses	.....	.....	.....	.....	14
Student Queen's Nurses	.....	.....	.....	.....	12
Student Male Queen's Nurse	.....	.....	.....	.....	1
State Enrolled Assistant Nurses	.....	.....	.....	.....	11
Part-time State Registered Nurses	.....	.....	.....	.....	8
Part-time State Enrolled Assistant Nurses	.....	.....	.....	.....	2
Total					91

2. Statistics

There was a steady increase in the demands made upon the Home Nursing Service during the year 1950. The total number of cases was 8,759 and the visits 240,762. This is an increase of 529 cases and 19,296 visits over those of 1949.

Analysis of Cases and Visits

	1950		1949	
	New Cases	Visits to Old & New	New Cases	Visits to Old & New
Pneumonia	86	1,326	151	2,380
Tuberculosis	128	5,734	84	3,900
Measles	4	33	15	176
Whooping Cough	7	62	2	9
Other Notifiable Diseases	20	222	15	99
Influenza	48	358	80	774
Mumps	—	—	1	9
Chickenpox	2	6	1	16
Other Infectious Diseases	17	156	5	47
Other Diseases occurring in children under five years of age	369	2,401	427	2,658
Complications of Pregnancy and Puerperium	50	372	78	767
Respiratory Diseases (incl. Bronchitis)	643	12,034	382	8,542
Disease of Blood Vessels (inc. Strokes)	504	23,720	535	22,283
Urogenital	197	6,885	228	9,611
Varicose Ulcers	137	11,614	119	9,890
Heart Disease	650	25,227	591	23,848
Disease of Nervous System	55	4,451	54	4,996
Gastro Intestinal	961	5,884	939	5,593
Cancer	481	19,608	435	16,600
All Other Diseases	3,198	120,669	3,046	108,860
Total Number of Cases and Visits	7,502	240,762	7,188	221,058

The following figures and those relating to the night service are included in the Analysis of Cases and Visits above.

<i>Disease</i>	<i>Type of Injection</i>	<i>No. of Injections</i>
Anaemias	Anahaemin, Hepistat, etc.	3,352
Cardiac	Mersalyl or Salergan	5,659
Diabetes	Insulin	48,232
Hay Fever	Pollacine, etc.	167
Narcotics	Morphia, etc.	3,003
	Penicillin	9,177
	Streptomycin	1,827
	Miscellaneous	2,997

The increase in the total number of visits has been chiefly due to the number of cases of Tuberculosis, other respiratory diseases and Cancer, which are now being nursed at home. In addition to daily or twice daily visits for routine nursing care these cases often require the administration of hypodermic or intra muscular injections.

3. Night Service

A total of 928 visits were paid between 9 p.m. and 8.30 a.m., an increase of 623 visits over the previous year (305). The majority of these visits are made for the administration of drugs.

The expansion of this service and the increase in the number of injections district nurses are now giving on behalf of the general medical practitioner emphasises the need for a syringe service.

4. Training Home

During the year 32 student Queen's Nurses entered for training, a greater number than in any previous year. Of these students 14 were sent by their employing authorities. Of the remaining 18 students, 15 continued on the staff and three resigned for other work. All except one were successful in the examination.

5. Nursing Appliances

The demand for nursing appliances has steadily increased, an average of 200 appliances being issued each month.

6. Liaison

The Association desires to express its appreciation of the help and encouragement given by the Medical Officer of Health and his staff.

(III) ANCILLARY SERVICES

THE DOMESTIC HELP SERVICE 1950

Miss Walton (Domestic Help Organiser)

During the past year the demand for, and the popularity of, the Domestic Help Service has steadily grown. People who have benefited by it, and are in further need, call or telephone, usually asking for the home help previously sent, but, if she is on a case, saying that they know whoever is sent will be satisfactory. This is a real tribute to the home helps who take pride in belonging to the service and in the reputation they have won. Some are god-mothers to children in whose homes they worked during the mother's confinement and most are asked to christening and birthday parties. If they work

at a pre-natal case they usually receive a letter or card announcing the arrival of the baby and an invitation to call and see the child.

When dealing with people there are bound to be clashes of temperament, i.e. the patient and/or the home help take an instant dislike to each other. The patient feels that everything the home help says or does is wrong and the home help complains that she cannot please the patient. The only solution is to replace the home help by someone as different in appearance and temperament as possible, and usually the second worker can do no wrong.

There are also the patients who, when visited, state the home help is all they could wish but, when they receive the account for the service, write making numerous complaints hoping in that way to avoid payment.

There are to be changes in the service in the near future. Since the passing of the National Health Service Act, 1946, the Bristol Council of Social Service, as agents of the Health Department, have been operating a home help service for the chronic and aged sick, but, at their request, this is to be taken over by the Health Department as from the 1st February, 1951. This will entail the appointment of a Deputy Home-Help Organiser, Case Visitors and clerical staff. With the new staff and the extra work there may be some dislocation of the whole service for a few weeks, but it is hoped that a smooth running scheme will be established with the least possible loss of service to the public.

One of the most difficult and tragic sides of the work to be taken over will be the provision of home helps for T.B. cases, especially as the number of diagnosed cases is unfortunately increasing. The majority of women are afraid to work in homes where there is someone suffering from this disease and it is anticipated that there may be some difficulty in obtaining volunteers for this work.

Each year the number of chronic and aged sick requiring help grows and as the hospitals and homes for old people have already long waiting lists, the home help service will be more and more in demand to meet this need. It is felt by the medical staff treating the aged as in-patients that quite a number of old people could be rehabilitated and returned to their own homes, provided home help is supplied to them, thus leaving beds free for other patients requiring treatment. Where a few hours help daily would meet the need, this could be done, but it would be economically impossible to provide each old person with full-time help.

It is anticipated that a "ceiling" will be placed on the number of home helps employed and the hours they work each week. This may mean the withdrawal of help from some cases already supplied, but every effort will be made to cover urgent necessity.

The number of hours worked during the year by the home helps are as follows:

Panel 1.	Maternity	.....	.....	.....	.....	27,702 $\frac{1}{4}$
Panel 2.	Sickness and Young Children	.....	.....	.....	.....	22,273 $\frac{3}{4}$
Panel 3.	Temporary sickness	.....	.....	.....	.....	11,703 $\frac{3}{4}$
Total						61,679 $\frac{3}{4}$

Number of home helps employed: Full-time 30
Part-time 27

The number of cases helped: 863

Assessments made during the year:

Full cost: 298 Part cost: 615 Free: 106 Total: 1,109
This includes cases subsequently cancelled.

The Home Help Section of the Bristol Council of Social Service. The number of hours worked by their home helps was: 292,888.

Number of home helps employed: 588 (all part-time).

Number of cases helped: 1,335.

Assessments made during the year:

Full cost: 87 Part cost: 428 Free: 820 Total: 1,335

3. DENTAL HEALTH

Mr. W. H. B. Stride (*Senior Dental Officer*)

(1) Mothers and Young Children

Dental examination was carried out for expectant and nursing mothers and young children at the five main health centres, during the year, and 393 sessions were devoted to this side of the work.

Owing to resignations during 1950 the staff now consists of only six whole-time dental officers, and, even with the help of nine sessions a week from part-time practitioners, dental activities have been somewhat curtailed.

Treatment is offered to those selected by the doctors at ante- and post-natal clinics and patients sent up for treatment by the nursing staff and health visitors. Emergency treatment is available at all times.

The number of mothers inspected this year was only 1,168 and during the last two years the number has fallen from 1,532 in 1949, and this might be taken as definite evidence of a falling-off of interest in dental treatment by this very important priority group of the population.

Certain facts should be taken into consideration, however, and, whereas at one time the mouths of many of the expectant mothers coming up for examination showed very serious gum conditions, or extensive caries and general neglect, necessitating loss of teeth and supply of dentures, things are very much better to-day. We find on examination that a large number of expectant mothers take a real interest in their teeth, are willing to have conservative treatment, and to co-operate in every way.

Previous to the passing of the new Health Act, in order that a mother could obtain free treatment, it was necessary for her to attend a clinic and have her extractions, etc., carried out at a time when she felt least able to undergo the treatment. Now this treatment can still be obtained at the clinic or, if she so desires, by an appointment made at her convenience with a private dental practitioner.

The offer by the Ministry of Health of an oral hygienist to carry out scaling and polishing and to give instruction in oral hygiene to the mothers and children, was accepted and Miss G. Luck was appointed on the 25th September, 1950. Since September, 50 mothers and 181 children have received scaling and polishing and instruction in oral hygiene. This work shows every sign of being much appreciated by the parents, and will be increasingly so as time goes on and its preventive value is realised.

DENTAL DEPARTMENT.

(a) Numbers provided with dental care.

	Examined		Needing Treatment		Treated		Made dentally fit
	1949	1950	1949	1950	1949	1950	1950
Expectant and nursing mothers	1,417	1,168	1,358	1,122	912	784	789
Children under five	2,269	2,315	2,148	2,229	2,228	2,187	2,203

(b) Forms of dental treatment provided.

Expectant and nursing mothers	Children under five		Expectant and nursing mothers	Children under five
1949			1950	
2,961	2,983	Extractions	2,582	3,137
177	—	Anæsthetics—Local	130	18
830	1,702	Anæsthetics—General	716	1,775
1,011	317	Fillings	562	179
755	—	Sealing or scaling and gum treatment	460	—
—	1,396	Silver nitrate treatment	—	1,018
273	—	Dressings	473	—

(II) SCHOOL CHILDREN.—*See School Health Report.*

4. THE MENTAL HEALTH SERVICE

by

Dr. J. Hutton (*Chief Assistant Medical Officer of Health*)

1. Introduction

The year under review is the second complete year of the new order brought about by the National Health Service Act of 1946.

It has been a year of consolidation and streamlining, of planning for the future and spreading of the relationships of the section with mental health work in other spheres. The evidence of all this endeavour, though not immediately apparent, will gradually become obvious with the passage of time.

2. Legislation

The powers and duties of the local health authority in relation to mental health are contained in:

The Mental Deficiency Acts 1913-38

The Lunacy and Mental Treatment Acts 1890-1930

The National Health Service Act 1946.

3. Administration

The City Council as local health authority have delegated their functions under these Acts to the health committee operating through the mental health sub-committee. This committee, consisting of a chairman and six members, meets monthly as a routine and at more frequent intervals when required.

The administration of the service is carried out by officers specially designated for the purpose and approved by the Minister of Health.

4. Staff Establishment

(a) Medical.

Chief Assistant M.O.H. as Director	.....	.....	.....	1
Assistant Medical Officers employed part-time for certification and other duties in relation to Lunacy and Mental Deficiency				5
				—
				6
				—

(b) Administrative and Supervisory

Supervising Officer	.....	.....	.....	.....	1
Assistant Supervising Officers	.....	.....	.....	.....	2
Duly authorised Officers	.....	.....	.....	.....	4
Mental Health Workers (1 part-time)	.....	.....	.....	.....	2
Clerks	.....	.....	.....	.....	4
					—
					13
					—

(c) Professional and Technical

Psychologist (not yet established)	.....	.....	.....	.....	1
Nursing Sister (part-time)	.....	.....	.....	.....	1
Speech Therapist (part-time)	.....	.....	.....	.....	1
Occupation Centre Supervisor	.....	.....	.....	.....	1
Occupation Centre Assistants (1 part-time)	.....	.....	.....	.....	6
Industrial Centre (Senior Instructor)	.....	.....	.....	.....	1
Industrial Centre (Junior Instructors)	.....	.....	.....	.....	2
Handyman Caretaker (resident)	.....	.....	.....	.....	1
Guides (part-time)	.....	.....	.....	.....	5
Domestic Helper (part-time)	.....	.....	.....	.....	1
					—
					20
					—

5. Staff Changes

Very considerable difficulty has been experienced in the past year in maintaining sufficient staff both in the administrative and the training work. Not only is there still a nation-wide shortage of trained mental health workers but newcomers to the field of social science are reluctant to take up such work as is carried out by the section.

Despite these difficulties, by the end of the year all vacancies had been filled and, in addition, the part-time services of a speech therapist had been obtained.

6. Training of Staff

The members of the staff are qualified academically or by experience to participate in the work and opportunity is taken at frequent intervals to improve and refresh their experience by instruction, conferences and refresher courses.

Training has been obtained for certain members of the instructional staff in dealing with the dumb mental defectives.

7. Teaching

Besides the considerable amount of instruction carried on for the benefit of the section the facilities of the service have been made available to the University in the training of doctors, medical students, health visitors, nurses, and social service students. Many visitors from overseas have come to observe the work of the centre under arrangements with the British Council and Ministry of Health.

Plans have been completed with the University of Bristol for the holding of an annual residential refresher course for duly authorised officers. Representatives will attend from local health authorities throughout the south-western parts of the country.

8. Voluntary Organisations

There are no statutory duties being performed by voluntary associations as agents of the local health authority in the mental health sphere.

At the same time one is very conscious of the valuable help afforded in various ways by such organisations as the boy scout and girl guide movements; the Bristol Crippled Children's Society; the Guild for the Handicapped; the Institute for the Deaf and Dumb and the Parent Teachers' Association.

9. Co-ordination and Co-operation with other Authorities

The happy relationships with other local health authorities, hospital management committees and the Regional Hospital Board, have continued throughout the year. An expansion of the supervisory work for patients on licence on behalf of hospital management committees is anticipated.

In the field of research, preliminary arrangements have been made with the Medical Director of the Burden Mental Research Department of the Stoke Park Colony Management Committee with a view to the mental health service participating fully in the projected research programme which is due to commence in 1951. Most valuable information will emerge from this work and will help to shape the future developments in the mental health sphere.

10. Work in the Community

General Explanation

To understand the purpose of the various enactments relating to mental illness and deficiency one must have a clear conception of the conditions to be reckoned with.

"Mental defect (i.e. deficiency of mind) is not the same thing as intellectual deficiency, though it includes it."

“The conception of mental deficiency is that of an arrested development of mind, either congenital or caused by injury or disease before development is complete.”

“The concept of mental illness is that of a disorder of a developed mind which has been functioning normally.”

“Unsoundness of mind is no longer regarded as, in its essence, a disorder of the intellectual or cognitive faculties . . . it is something much more profoundly related to the whole organism, a morbid change in the emotional and instinctive activities, with or without intellectual derangement.”

(a) Under the Mental Deficiency Acts

Ascertainment. The Local Health Authority has the duty of ascertaining what persons within its area are defectives subject to be dealt with under the Acts and to make suitable provision for such persons. There is a great deal of mental subnormality in the community, but such a state is not that referred to as mental deficiency within the meaning of the Act, which requires the deficiency to be of such a degree in the case of children to prevent their deriving educational benefit within the school system or, in the case of adults, that they require care, supervision and control for their welfare.

A further distinction has to be made between mental defectives within the meaning of the Act who are subject to be dealt with under the Act for the purposes of care, supervision and control and those who are not subject to be dealt with as they are already receiving, from their friends or relatives, a sufficient measure of care, supervision and control. It will be seen therefore that the work of ascertainment is of very great importance as it forms the ground on which decisions as to treatment are made.

Information about persons who may be subject to be dealt with under the Acts is received mainly from the education department, medical practitioners, other sections of the health department and the courts.

Provision of Care for Mental Defectives. There are three forms of care that can be arranged for mental defectives, namely:

- (i) Supervision;
- (ii) Guardianship; and
- (iii) Institutional care.

Supervision. No judicial order is required for this purpose, the decision to place a person under supervision being the function of the appropriate committee of the local health authority.

Supervision means the regular visitation of mental defectives in their homes for the purpose of being assured that they are being properly cared for or that they are managing their affairs in a satisfactory manner.

This form of care has considerable preventative quality in that it frequently obviates the necessity for stricter custodial care at a later date by helping the defective to avoid trouble at the outset. Obviously the success of such work depends to a large extent on the skill of the visitor in the handling of the defective and his family in a friendly manner.

The knowledge possessed by the visitors must be wide and up to date, so that advice can be given on all sorts of subjects related to the mental defective's daily life and problems. Many supervision cases that have been excluded from school and have not been found employment, or are awaiting colony training, derive great benefit by attending the Occupation and Industrial Centre at Marlborough House.

Guardianship. This form of care is given under Judicial Order being suited to those cases in which supervision is not adequate in providing for the

defective's needs. Control is more strict but on the other hand there are benefits enjoyed by the defectives in the form of financial help, clothing, and bedding.

Institutional Care. For those patients who require training for special work, custodial care, or a stronger form of discipline, residence in an institution is advisable. A Judicial Order is required in most cases of this type being obtained on petition.

Provision of Training for Mental Defectives

Occupation Centre. The Occupation Centre provides for mentally defective children excluded from school under Section 57 of the Education Act, 1944, and who have been reported to the local health authority as being found to be suffering from a "disability of mind of such a nature and to such an extent as to make them incapable of receiving education at school."

The majority of defectives on the Centre Register are approximately of imbecile grade, and when such children attain the age of sixteen years they are not automatically discharged from the Centre, but if found to be unemployed, are transferred to the Industrial Centre.

It is not possible in this report to give a detailed account of the various methods used for the training of mentally defective children, but the curriculum includes habit training, sense training, speech training, music and movement, story-telling, training in simple domestic tasks and table manners, as well as periods for free-play, rest and relaxation.

Although a certain amount of routine instruction is necessary to give the pupils stability, every subject is treated in such a way as to adapt it to the limitations of their mind.

The fundamental aims of the curriculum may be summarised as follows:

- (1) So to develop the child's mind and body within the limitations of his defect, that both at the Centre and in his home he may live a happy and interesting life.
- (2) To assist the child to form good habits, to acquire self-control and develop social sense as he learns to work and play with other children.
- (3) To relieve the strain on the family caused by the presence of an untrained defective child, and to assist the parents of such a child in his care and upbringing.

Each child's progress is carefully observed and periodically recorded. It must be realised that mentally defective children respond very slowly to training. There is, however, abundant evidence to show that, given sufficient opportunity they become happier, more self-reliant, and more controlled in behaviour; and that in their homes many are no longer an unnecessary burden but can play a humble part in the family life and help in many small household duties.

Industrial Centre. The high standard of efficiency which has been attained in the workshops is evident in the quality of finished articles produced.

Training is the first consideration in these workshops, and a number of patients have been able to take up simple remunerative employment as a result.

Interest in the various crafts has been well-maintained. The bootshop has been able to cope with all the shoe repairs from parents, as well as those sent in from the residential nurseries. Very useful work has also been carried out in the carpenter's shop, including the manufacture of new articles, repairs to furniture, and toy-making.

Patients have also been occupied on the internal painting and decoration of the premises.

There has been a steady demand for the output from the brushmaking section, and a new venture of coir mat making has been most successful.

Considerable progress has been made in the laying down of concrete paths and flower beds, giving the front of the Centre a most pleasing appearance.

The adult female class is making some progress but is extremely handicapped by lack of accommodation and the necessary equipment. It is hoped that these difficulties will shortly be overcome when the existing rooms at the Centre are converted.

Attendance. There has been an increase in the number of persons attending the Centre, and accommodation difficulties will soon make it necessary to restrict admission until the proposed temporary accommodation on the Kingsdown Parade site is completed. Otherwise it is feared that a reduction in the training facilities, as well as an undue burden on the members of the staff, will result.

Summer Camps. At the end of June, 1950, a week's holiday in camp at Brean Down, Weston-super-Mare, was arranged for fifteen female patients attending the Centre, and this was followed during the first week in July by a party of thirty-three male patients.

The introduction of females to the summer camp under canvas was arranged for the first time, and so successful was this venture that it is hoped to extend the facilities to the whole Centre in future. Besides giving these children a much-needed week's holiday, camp provides an excellent opportunity for the further development of social sense, as well as encouraging initiative and self-reliance.

Scouts and Guides. Scouting and Guiding are now well-established at the Centre, and play a very important part in training by setting a high standard of conduct which the Guides and Scouts are expected and encouraged to live up to. This has resulted in many difficult cases becoming amenable to discipline.

Christmas Festivities. On the 19th December, 1950, an open day and exhibition of work was held at the Centre, followed by a concert presented by the children.

The standard of the work exhibited, and the skill shown by the children, called for high praise and appreciation from the many visitors present, as well as showing the high degree of training accomplished by the staff.

A Christmas Party was held on the 21st December, 1950. After an excellent tea, the children saw a marionette show, kindly presented by Mr. Gage, after which each child received a present from the Christmas tree.

The interest taken by the mentally defective children in, and their reactions to, the marionettes, were most remarkable, calling for special comment. It is hoped to explore the training value of puppets and marionettes in relation to the mentally defective child, and, as even the lowest grades of mental defectives are known to respond to the stimulus of music and rhythm, it is possible that the combination of music, rhythm, colour and animation will prove to be a very effective training medium.

Parent-Teachers' Association. This organisation has now been in existence for two years, and has proved a most successful venture. Its members are the parents of the children attending the Occupation Centre, coming from every walk of life. The activities are many and varied.

The relationship between the parents and teachers continues to be very friendly, the aim of the parents being to understand the nature of their

children's deficiency and to co-operate with the staff in every possible way in the training of the children.

At meetings, which have been well attended, lectures have been given by medical and lay workers in the field, social evenings have been held; and from the proceeds of collections taken at these it was possible to arrange for the whole Centre to have a day at the Bristol Zoo. This event was so successful that the repetition of a similar annual outing can be considered to be worthwhile and desirable.

(b) Under the Lunacy and Mental Treatment Acts

The responsibilities of the local health authority under these Acts are carried out by officers of the section duly authorised for the purpose. It is their duty to give advice and if necessary undertake the initial proceedings appropriate to the circumstances for obtaining admission to hospital of persons suffering from mental illness.

(c) Prevention of Illness; Care and Aftercare (Under the National Health Service Act)

Mental Health Advisory Bureau. The Mental Health Advisory Bureau, situated at Marlborough House, has had a busy year.

A mental health social worker is in attendance during certain hours of the day, and anyone can attend the bureau without appointment or introduction. During the year some 450 general enquiries have been dealt with.

Cases are referred by the Ministry of Labour employment officers, health visitors, probation officers, almoners, and local voluntary workers, and it is hoped that they will continue to make the bureau as widely known as possible amongst those who may be in need of this service.

It is hoped that the scheme will in some measure reduce the incidence of mental instability, by preventing minor emotional or psychological difficulties developing into more serious mental illness.

The mental health worker is called upon to give help and advice, and assisting in effecting adjustments in the home life or with regard to employment; and in some cases, if a person is unable to attend the bureau, the mental health worker will pay a visit to the home.

Should specialist advice be necessary, the mental health worker will suggest further investigation at the Psychiatric Outpatients' Clinic at one of the hospitals or elsewhere, and in some cases make the necessary appointment after consultation with the patient's private doctor.

Care and Aftercare. The care of persons in the community who suffer from mental deficiency or mental illness is undertaken either statutorily or by arrangement with private doctors, consultants, or hospital management committees.

The commitment is a growing one and of great importance bearing in mind the present shortage of hospital and colony accommodation. A friendly form of unofficial supervision is provided for mental defectives who have been discharged from order; for persons discharged from the Services on psychiatric grounds; for border-line defectives; psychotics and psychoneurotics and epileptics suffering from anti-social traits; so that early action can be taken should they break down. The organisation seeks to help such persons, many of whom would never in the ordinary way reach a psychiatric clinic. Such care is not merely welfare and assistance but an active therapeutic measure demanding the special skill and technique of trained and experienced workers.

Ambulance Service. The council's ambulance service has been readily available for the transport of cases of mental illness and mental deficiency during the year.

11. Conclusion

It will be seen from this report that the department has vigorously fulfilled its function of providing adequate care, supervision and control for all mentally defective persons residing within the area, as well as arranging for the care and treatment of those suffering from mental illness. The benefit to patients in attendance at the Occupation and Industrial Centres has been noted with satisfaction and appreciation is reflected in the many letters of thankfulness received from parents and guardians.

It is my pleasant duty to thank the staff for the enthusiastic way in which they have performed their task, at times in the face of serious depletion from sickness and other causes.

To Mr. F. Morton, Supervising Officer, goes my grateful appreciation for tireless energy expended in welding the service into a cohesive unit, and to the committee who, under the leadership of their most able chairman, have given untiring support in this work for the benefit of the mentally afflicted.

12. Statistics

(a) *Mental Deficiency Acts, 1913-38.*

(i) <i>Total number of ascertained Mental Defectives known to the local health authority on 31-12-50</i>	<i>M.</i>	<i>F.</i>	<i>Total</i>
	845	833	1,678

These are distributed as follows:

In institutions and on licence	344	334	678
Under Guardianship	19	37	56
Under Supervision	435	369	804
Pending	11	13	24
Under friendly oversight	4	4	8
Discharged from Order to friendly oversight	32	76	108

Rate per 1,000 population 3.8

NOT included in this figure are children regarded as educationally sub-normal under the local Education Authority and who may later become subject to be dealt with under the M.D. Acts

654

(ii) <i>Total persons "ascertained" during the twelve months ended 31-12-50</i>	<i>Total</i>
	108

FROM THE FOLLOWING SOURCES:

Local Education Authority	86
General Practitioners	11
Other	8
Courts	3

and were dealt with as follows:

To institutions	18
Under Guardianship	0
Under Supervision	59
Died	2
Readmitted to Special School	1
Action not yet taken (Christmas leavers)	28

108

(iii) <i>Total persons in the Statutory care of the local authority on 31-12-50</i>				M.	F.	Total
as follows:				465	419	884
Under Guardianship				19	37	56
Under Supervision				435	369	804
Pending				11	13	24
Of these there were awaiting admission to institutions				2	2	4
(iv) <i>Discharged from Care during the twelve months ended 31-12-50</i>				22	25	47
as follows:						
by authority of Board of Control				7	17	24
by operation of Law				4	6	10
by local health authority				11	2	13
(v) <i>Deaths during the twelve months ended 31-12-50</i>				6	5	11
as follows:						
While in institution				3	4	7
While under Guardianship				—	1	1
While under Supervision				3	—	3
(b) <i>Lunacy and Mental Treatment Acts, 1890-1930.</i>						
(i) <i>Removals effected in twelve months ended 31-12-50</i>				252	321	573
as follows:						
Certified				34	71	105
Voluntary admissions				71	55	126
Temporary admissions				10	15	25
Removed but not certified:						
No order made				47	59	106
Detained under Sec. 21 and 21A				44	58	102
Removed from private to public Hospitals				12	13	25
Private admissions				1	3	4
Urgency orders				—	3	3
Other than L. & M.T. Acts				33	44	77
(ii) <i>Total Bristol patients in Mental Hospitals on 31-12-50</i>				M.	F.	Total
as follows:				792	1215	2007
Certified				600	884	1484
Voluntary				184	317	501
Temporary				8	14	22
(c) <i>Social After Care</i>						
<i>The numbers of persons who on 31-12-50 were receiving after-care or friendly oversight by the local health authority</i>						
as follows:				57	76	133
Persons discharged from order under the M.D. Acts				32	76	108
Ex-Service persons referred for psychiatric after-care				25	—	25

5. PREVENTION OF ILLNESS, CARE, AND AFTER-CARE

(i) TUBERCULOSIS—CARE AND AFTER-CARE ARRANGEMENTS

Mr. C. L. Bryant (*Tuberculosis Welfare Officer*)

Financial Assistance. The assessment and arrangement for payment of special cash allowances in respect of cases of pulmonary tuberculosis is now the responsibility of the National Assistance Board, which acts upon recommendations of the chest physician.

Patients who are recommended for allowances are interviewed by the Tuberculosis Welfare Officer and issued with an official application form to forward to the Board. The necessary medical certificate being forwarded to the appropriate office of the Board.

To qualify for this special allowance, the patient must be suffering from pulmonary tuberculosis and must have incurred loss of income through having to give up work to undergo treatment recommended by the chest physician.

During 1950, 369 patients have been issued with application forms.

Patients suffering from other forms of tuberculosis are at liberty to apply to the National Assistance Board for an allowance of the standard rate, which is a considerably lower scale than the special allowance for pulmonary cases.

The Welfare Officer maintains close co-operation with the officers of the Board who are invariably sympathetically disposed and do the utmost within their powers for patients and dependants.

Extra Nourishment. The scheme enabling patients to be granted two pints of free milk per day has continued throughout the year and the daily average number of patients receiving a free allowance was 330.

The number of new grants made during the year was 280, an increase of 22 on the figure for 1949; this increase is due to some extent to the increased number of patients receiving treatment at home.

These grants are made upon a recommendation by the chest physician and are reviewed at least every three months. They are subject to an income limit which corresponds to the special allowances payable by the National Assistance Board for pulmonary tuberculosis cases.

This free milk allowance is not limited to cases of pulmonary tuberculosis but is available in all forms of tuberculosis.

Housing. By an arrangement with the Housing Committee, tuberculous persons who have applied for re-housing are supported by the Medical Officer of Health, a special investigation being made at the home in all cases, and a recommendation for additional points forwarded to the Housing Committee after consideration of the home conditions, and the medical aspect of the case.

During the year 221 such cases were supported, and ??? cases were re-housed.

Rehabilitation. Patients who are considered suitable for light or part-time employment by the chest physician are referred to the Ministry of Labour for registration under the Disabled Persons (Employment) Act, and with a view to being placed in suitable employment or training.

	No. placed in full-time employment	No. placed in part-time employment	No. sent for training
Males ..	41	—	12 Training
Females ..	24	2	3 Industrial Rehabilitation Units
			5 Training

Special Re-employ Factory. The Voluntary Care Committee workshop at Southmead was let on lease, to the Disabled Persons (Employment) Corporation, as a re-employ factory for the employment of disabled tuberculous persons and, at the end of 1950, 43 ex-patients (34 males and nine females) were employed in cabinet making, etc. It is hoped that the number employed will eventually increase to 70.

Interviews. The welfare officers have, during the year, interviewed approximately 2,700 persons in connection with financial assistance, free milk, employment, occupational therapy, housing and many other matters on which advice and help can be given.

Voluntary Care Committee. This committee, which is a voluntary body, consisting of representatives of the local authority, and various voluntary social, religious and medical organisations in the city, works in close co-operation with the Department of Public Health, and the Tuberculosis Welfare Officer acts as honorary secretary.

Assistance in kind and in cash is made to individual cases of tuberculosis where help is most needed, and a summary of the year's work follows:

Grants made during 1950, with comparative figures for 1949

	1950	1949
Grants of clothing	198	191
Grants of footwear	37	55
Grants of bedding	104	100
Grants of furniture, etc.	5	2
Grant of invalid chair	—	1
	<hr/> 344	<hr/> 349

Cash Allowances

Towards cost of domestic help	10	9
Travelling expenses	6	2
Pocket money (patients in hospital)	1	2
Cost of spectacles	1	—
Convalescent home treatment	1	—
Removal expenses	4	8
Rent arrears	—	2
Sundry	3	2
	<hr/> 26	<hr/> 25
Loan of appliances (bed pans, air rings, bed rests, etc.)	66	35
	<hr/> 436	<hr/> 409

These forms of assistance are not limited to the patient but are extended to dependants.

Occupational Therapy. The classes of occupational therapy commenced by the Voluntary Care Committee in 1946, have continued in charge of a full-time instructress. Three sessions each of two hours are held per week. The average attendance at each session is six.

The handicrafts taught include various forms of leather work, rug making, toy making, embroidery, lamp shades and light carpentry.

Patients unfit to attend classes are visited in their homes, supplied with materials and given instruction. The occupational therapist paid 366 domiciliary visits during the year.

Kiosks. The committee operate kiosks at Southmead, Ham Green, Frenchay and Snowdon Road Hospital, finding employment for six patients in the sale of tobacco, cigarettes, stationery and sundry other goods to patients, staff and visitors to these hospitals.

General. The welfare officer and staff work in close co-operation with the National Assistance Board, the Ministries of National Insurance and Pensions, the Welfare Services Committee, Regional Hospital Board and Hospital Management Committees, the Council of Social Service, and the Resettlement Officers of the Ministry of Labour.

(ii) VENEREAL DISEASES

The responsibility for the diagnosis and treatment of venereal diseases lies with the Regional Hospital Board, the epidemiology and welfare work being the responsibility of the Local Health Authority.

The following table shows the known incidence of venereal diseases in Bristol residents during the years 1940-1950.

Incidence of Venereal Diseases, 1940-1950. Bristol

Year	Total Syphilis		Early Syphilis (included in total)		Gonorrhoea		Chancroid	
	Male	Female	Male	Female	Male	Female	Male	Female
1940	85	30	42	8	331	98	8	—
1941	144	61	114	23	398	124	2	—
1942	225	73	182	43	440	157	38	—
1943	238	117	199	73	526	186	7	—
1944	152	137	126	97	317	235	31	—
1945	120	140	89	78	354	176	35	5
1946	186	140	139	93	600	154	34	4
1947	156	92	120	60	634	134	24	1
1948	122	79	77	50	448	92	26	1
1949	82	50	39	18	128	42	8	—
1950	45	52	12	7	115	26	10	—

It will be seen from this table that there has been a further steep fall in the known incidence of all the specific infections. Early syphilis, which is a good index of the prevalence of venereal disease in the community, has fallen by two-thirds in the case of males and by about two-thirds in the case of females, as compared with 1949.

V.D. WELFARE

(*Welfare Officers: Miss A. Stinchcombe and Mr. V. Deller*)

The Welfare Section of the Venereal Diseases Department has again maintained a high rate of activity during the year, assisted by cordial and harmonious co-operation from the medical staff.

The following analysis presents the statistical angle of the welfare officers' work during the year.

	M.	F.
Total number of Registrations during 1950	1,589	538
New cases persuaded by the welfare officers to attend clinics for medical examination in view of possible risk of infection	92	103
New cases who attended through other agencies.....	1,497	435
Number of cases on welfare officers' register	723	582
Welfare officers' attendances at clinic	344	393
Number of new cases interviewed in the clinic	464	116
Current case interviews	624	902
In-patient interviews	269	220
Visits to defaulters	505	404
Actual number of defaulters returned	368	249
Consultations with voluntary bodies	171	200

Default from Treatment

Quiet, constructive work has been carried out in order to meet this problem, with the following results:

	M.	F.
Number of defaulters	437	289
Number of recurrent defaulters included in above figures	98	78
Number returned	368	249
Number not returned	69	40
Found to be attending clinics outside Bristol area	41	12
Stated attending own doctor	2	2
Refused to attend	7	2
No trace—false name—unknown at address	5	0
No trace—left address—destination unknown	6	7
Carried forward to 1951	8	17
	69	40

Where necessary the treatment of expectant mothers at the ante-natal clinics has been continued with marked success and the willing assistance of the maternity and child welfare department is extremely helpful, not only to the patients, but to the venereal diseases department.

Interviews in Clinics and Hospitals

The value of these interviews is inestimable in providing a comprehensive background of home and family conditions, thus enabling the welfare officers to perform their duties efficiently and in the best interests of the patients and with preservation of the utmost confidence. They often reveal information of the utmost importance in tracing other contacts and enabling welfare work of various kinds to be carried out.

Marital Problems

These problems form a vital angle of clinic welfare work and the following table illustrates the problem as it affects the department's activities:

No. of interviews	Referred to other Agencies	Current difficulties resolved	Results unknown	Divorce proceedings instituted
63	6	48	5	4

Employment

Employment was found for 26 patients and 15 patients were introduced to a suitable club or other organisation. The employment question has produced some difficulties due to reduced vacancies available, but in conjunction with the Ministry of Labour quiet constructive efforts have been made in obtaining suitable employment. The welfare officers' frequent interviews with the management of various firms have proved effective in providing opportunities of employment for other patients.

Contact Tracing

This forms one of the major aspects of our work and entails arduous work in interviewing and visiting, often with the minimum of information, in order to make contact with the right person. In addition to routine investigation, regular night patrols have been continued, enabling your officers to keep in touch with the known promiscuous types and to achieve no small success in persuading them to attend clinic periodically.

Seamen

Acknowledgement is made of the cordial relationship with the Port Health Authorities, Seamen's Mission, Shipping Federation and ships' captains, which has resulted in many seamen and their contacts being persuaded to attend clinic and minimise the risk of becoming a public health problem.

Younger Age Groups

The officers have continued their careful attention to the young people referred to the clinics and have endeavoured to co-operate with parents, youth organisations and other social bodies in directing the energies of these young people into worth-while channels. There is some decrease amongst the "teen-age" group and juvenile delinquents referred from the remand homes, which seems to indicate the return to normal conditions.

V.D. Voluntary Care Committee

During the year this committee has provided recreational facilities for our in-patients at a cost of £30. They have also donated £8 8s. od. to be used in providing Christmas gifts and a party for the children. In addition £2 7s. 6d. was given in special cases needing financial assistance. This assistance has been greatly appreciated by the patients.

Voluntary Bodies

The co-operation of the various voluntary bodies has enabled a large number of patients to be assisted in a number of ways, e.g. convalescence, accommodation, financial assistance, clothing, and legal advice.

Lectures

Lectures and talks during the year were given to various organisations.

(iii) REPORT OF THE NUTRITIONIST

By Charlotte M. Wood, M.A.

"Man ist, was er iszt."

Fundamentally nutrition is of vital importance for the growth and maintenance of all body cells and it may well be the single most important environmental factor affecting health. It is the function of a nutritionist to make the community aware of this importance and to spread a knowledge of the simple principles of good nutrition so that health may be promoted and disease prevented. With the continued and in some cases added restrictions of supplies in the past year, it has become more than ever necessary for this knowledge to be brought to those responsible for providing meals, whether housewives or caterers, in order that they may know how to use available commodities to the best advantage and how to supplement these with foods which are more abundant; for, although certain foods may be scarce and purchasing power restricted, ignorance still prevents a great many people from enjoying the benefits of good nutrition.

In some cases I have been able to contact public audiences directly, but mainly I have had to rely on imparting the knowledge to others, such as district nurses and health visitors who, by the very nature of their duties in the homes, are able to instruct and guide greater numbers.

Below is a summary of the various types of work which have been undertaken and which are continuing in the different fields.

Health Department.

I have continued to visit the Day Nurseries, Ante-natal and Infant Welfare Clinics and to advise on special feeding problems. Here, through the co-operation of the Education Department, we have had the services of a qualified cookery demonstrator and her practical demonstrations on the preparation and cooking of certain foods and their importance in the diet have been of great value and much appreciated by the mothers. I have given lectures to students in training, nursery nurses, children's nurses, district nurses, health visitors and medical students through the year. In these lectures I try to relate the scientific knowledge of nutrition to its practical application so that the students may know, at the end, not only the function of nutrients in the body and the results of inadequacy or deficiency, but also the food in which these nutrients are to be found and the best way to purchase, store, prepare, and serve these foods. A series of talks to health visitors on topical nutrition problems has been started and will continue once a month throughout the coming year. Midwives also attend these talks when they are free.

Welfare Department.

I have paid several visits to one of the huttid encampments for evicted families to see if there was any way of stimulating, promoting and afterwards sustaining some interest in the cookery side of housecraft. I have also prepared a four-weekly dietary for two new Eventide homes.

Children's Committee.

The Children's Homes in the area have been visited and help and advice on nutrition given.

If the services of a nutritionist are to benefit the community as a whole, then she must constantly be making new contacts with the public and seeking fresh and interesting approaches to her subject. There has been an increasing number of requests for talks on nutrition to women's clubs and guilds throughout the town and, although these are time consuming and occasionally there are only small audiences, I feel that women, and in particular housewives, have such an important part to play in improving standards of nutrition in the

home, that I have undertaken as many of these as possible. The new film strips, charts on feeding and models of food, which I have had added to my stock of visual aids this year, have helped to make these lectures more colourful and interesting.

Advice regarding the satisfactory nutrition of young adults and canteen meals has also been given to a firm employing a large number of school leavers.

Research in surveying nutritional status and conditions affecting the same and the application of the knowledge of nutrition to problems thus uncovered, I consider to be a vital part of a nutritionist's work. Towards the end of the summer I started an investigation into 'The effects of occupation and home responsibilities on the meals and food habits of mothers in industry and at home'. The field work has been completed and a report of the findings will appear early in 1951. I have also carried out a pilot survey at an Infant Welfare Clinic on 'The effects of introducing certain foods in babies' diets at weaning time'. From the results of this survey it will be decided whether this investigation should proceed with a larger number of babies from different areas in the coming year.

6. HEALTH AND TUTORIAL EDUCATION

(1). HEALTH EDUCATION.

By D. M. Evans, B.A. (Personal Assistant to M.O.H.)

The Role of Health Education

Social medicine, it has been argued, "embraces on the one hand the whole of the activities of the public health administration and of the remedial and allied social services, and, on the other, the special disciplines necessary for the advancement of knowledge relating to sickness and health in the community."^{*}

Medical and scientific knowledge can prevent disease by stopping its onset; by checking its progress and, by rehabilitation, enabling those falling sick to recover more quickly and prevent relapse. The basis of social and preventive medicine rests on the acceptance of these objectives as being desirable and necessary. Given these ends health education becomes the OFFENSIVE ARM by which knowledge can be propagated and behaviour influenced in the direction of their fulfillment.

Aims of Health Education. The aims of health education may be defined as: (1) the formation of healthy habits; (2) the development of an active (POSITIVE) attitude towards health and its maintenance as the responsibility of each individual; (3) the acquisition of the knowledge and training necessary for such a POSITIVE attitude towards health.

It will be seen that the achievement of these high ideals is by no means an easy task but a positive attitude towards health and social living is required if our present social and health services are to be used intelligently and with a sense of responsibility. Ill health is the enemy of family and social efficiency. The family is made up of individuals who are also citizens and producers in the community of which they form part. Illness in the family can affect their ability to contribute to the community life (as citizens); or to produce the maximum of goods and services quantitatively and qualitatively or cause absenteeism (as producers); and, finally, they are not able to live their own lives in such a way as to derive the greatest happiness from the day's events and situations (as individuals).

In the past preventive medicine concentrated on making a healthy life possible for ALL and much of the advancement in social health was made by

^{*}Professor Ryle. "Changing Disciplines."

the great sanitary advances which, it may be said, were often imposed upon the individual and required little co-operation from him and was often done without his knowledge. One of the great needs of our times is a sense of individual responsibility for the maintenance of personal and community health and to achieve this a wider spread of knowledge and information on health matters is necessary.

The Co-ordination of Health Education.

To co-ordinate the work of health educators towards this goal is no easy task, but it is one which must be attempted if the most economic use is to be made of trained personnel who are limited in numbers and who very often have other important medico-social or educational duties to perform. How is this best achieved?

1. The Problem Stated

Broadly speaking, the problem of health education of a community resolves itself into two main aspects: (1) the continued education of the "natural educators" in the field who have specialist knowledge and/or educational responsibilities; and (2) the education of the general public.

In a city of nearly 450,000 inhabitants with varied and complex industries, with a great seaport to which come the shipping of many lands laden with many cargoes, with educational institutions which include a university, colleges and public schools, and with many historic commercial and administrative centres, it follows that the health problems involved are as numberless as the sands of the sea.

Man is a gregarious animal and, as such, he is given to meeting in groups and to being influenced by his fellows within that group. By formal education and by social intercourse he acquires certain habits and forms sentiments based on his emotional response to his experience. In short, men can be reached, both formally and informally, through their social institutions.

In addition, man is an individual. Apart from his group experiences there is personal experience which is peculiar to that individual.

All education tends to balance these two divergent forces by "individual" and by "group" teaching according to the prevailing social philosophy. In a democracy both aspects are considered to be complementary and individual initiative is reconciled with social responsibility.

2. The Method

What does all this mean in practical terms? How does the public health department attempt to reach the "natural educators" and the general public? By what means do the workers in the field of health education attempt to promote "individual" and "group education"? If the health problems involved are as numberless as the sands of the sea, what subjects receive priority?

First it is necessary to be clear that in a public health department all workers are, to a great or lesser extent, involved, directly or indirectly, in health education in their routine duties. Who are these workers? These workers include doctors, dentists, the nutritionist, the public analyst, health visitors, midwives, district nurses, sanitary inspectors, clinic assistants, home helps, welfare officers, and others. These workers, by the very nature of their work, are "natural educators." There are, of course, many "natural educators" outside of the public health department, ranging from general practitioners, pharmacists, hospital doctors, nurses, university and school teachers, ministers of religion, welfare workers, voluntary as well as paid, and many others. These often work in close liaison with the department's own health educators.

It is apparent that a large number of people are engaged in health edu-

cation work either directly or indirectly and that a number of topics must be selected and given priority. Help must be given in the provision of educational facilities, equipment and material. In this a co-ordinator can help. As Personal Assistant to the Medical Officer of Health the co-ordination and stimulation of health education has been one of my major responsibilities. I have set out below some of the ways in which I have been able to help during 1950.

Health Education Centre. During 1950 a health education lecture room was equipped in the Central Health Clinic to act as a centre for the department's teaching activities to the "natural educators" and to selected groups of workers, societies, or students from the general public. The lecture room seats about 60-70 people, is provided with a rostrum, reversible blackboard, a large-scale map of the city, notice-boards and black-out curtains. Equipment available includes a film strip projector, a large screen and an epidiascope, and for film shows full use is made, and collaboration readily given by, the Films Division of the Central Office of Information, S.W. Region.

Clean Food Campaign. This has meant that a greatly accelerated drive on clean food, for example, has been made possible. A large number of lectures have been given by sanitary inspectors to well-attended meetings of food handlers, canteen workers, butchers and various societies. These lectures have been given frequently in the lecture room, quite often at the place of work, and sometimes at the meeting place of the group or society concerned.

The place of visual aids in group education of this kind is of paramount importance and full use has been made of the film "Another Case of Poisoning" shown for the department by the Central Office of Information, but additional material was thought to be necessary allowing the more intimate use of a lecturer, and for this reason three film strips were obtained from the Central Council for Health Education on the subject of food hygiene. The procedure has been to arrange for lectures to food handlers and traders to be organised into two separate lectures:

1. Subject introduced by sanitary inspector; showing of "Another Case of Poisoning"; short discussion; break; lecture by sanitary inspector using a film strip on food infections; questions and discussion.
2. Similar procedure using film strips on the "Food Handlers Part" and "Hygiene in the Kitchen."

About 50-70 people from food handling and catering establishments have attended each of these lectures when given at the Central Clinic, and audiences at least as large have been reached at places of employment by the sanitary inspectors and the food and drugs section.

Lectures and Talks. The teaching activities of the department are many and varied and, in Bristol, the nutritionist and the sister tutor, and her deputy, are particularly active in this connection. Many of these lectures are given to voluntary bodies outside of normal working hours and increasing demands are being made for their assistance. In addition many of the department's doctors are active in first-aid teaching, civil defence, and with parent-teachers' associations. The welfare officers of the department have important connections with voluntary bodies which allow them to augment the teaching which may be given officially through the department.

At one time it would appear that health visitors were most active in the field of individual teaching—influencing the mother by personal contact in the home and at the clinic; and with the school child at the school or clinic as school nurse. Little group teaching was attempted as this appears to have been thought to be a difficult matter requiring a trained teacher or was outside the scope of their work. During 1950 an attempt was made to balance this view by providing them with opportunities for group teaching at the

infant welfare or ante-natal clinics by helping them with film strips, tuition on the use of the film strip projector as a teaching medium, and with the use of films. This was done in full collaboration with the matron of external nursing services and the chief assistant medical officer of health (maternity and child welfare).

Films. Films were arranged with the Central Office of Information to be shown at clinics on a definite date. This fact was advertised in advance at the clinics, and to ensure maximum attendance on the day, the sister-in-charge at the clinic made a supplementary personal approach when necessary. A circular was sent to the clinic sister, by the personal assistant to the medical officer of health, setting out the arrangements, aim and method of the film showing. The total time taken to be half an hour: (1) introduction by health visitor; (2) showing of film (e.g. "Your Children's Meals," 15 minutes); (3) a short discussion stimulated by health visitor; (4) a general interest film.

Visual Aids. With audiences differing greatly in intellectual attainment, in experience and interests, it has been found by experience that to hold interest it is essential to provide concrete examples based on fact. Visual aids are used wherever possible, films, film strips, exhibitions, demonstrations, illustrative material and posters.

Film Strips. The following film strips were obtained by the personal assistant to the medical officer of health to provide a central pool from which the field workers could draw when in need of visual aids for health education and tutorial work:

Subject	Publisher	Proposed user(s)	Type of audience
1. Food and Health Pt. I	Common Ground	Nutritionist & Sister Tutor	Students and miscellaneous audiences.
2. Carbohydrates and the Calories Pt. II ...	"		
3. Fats and proteins Pt. III	"		
4. Vitamins and Salts Pt. IV	"		
5. Feeding the under 20's	Ministry of Food		
6. Welfare Foods No. 1	"		
7. Welfare Foods No. 2	"		
8. The Story of the Englishmen—Food and Nutrition Pt. I and II	Military Training films		
9. Nutrition Pt. I and II			
10.			
11. Elimination	Gaumont British Instructional	Sister Tutor	Nursing students
12. Burns and Scalds in the Home	Unicorn Head	Health Visitor	Groups of mothers at clinics Parent Teachers Association Various Societies
13. About Ourselves ...	Centurion	Sister Tutor	Pre-nursing students
14. First Aid	Daily Mail	Doctors and Health Visitors	Civil Defence, Girl Guides; Boy Scouts etc.
15. Food handling: Pt. I What Food Infections Are	Central Council for Health Education	Sanitary Inspectors Doctors, Nutritionist Sister Tutor, Health Visitors	Food handlers, Housewives at clinics and to various societies
16. The Food Handlers Part	"		Students and various audiences.
17. Hygiene in the Kitchen	"		
18. Lice and Diseases ...	Military Training Film		
19. Problem Families ...	M.O.H. Salford	Doctors, Health Visitors	Students and various audiences.

Exhibitions. Small exhibitions provided by the Central Council for Health Education have been used at various clinics as a means of furthering the spread of elementary health education. These are sometimes used as a further stimulus to discussion at film shows helping the health visitor to introduce the subject and the films by providing an additional visual aid talking point. In November, 1950, an exhibition, borrowed from the Ministry of Health, on the problem of food poisoning was shown in the foyer of the Odeon Cinema—in collaboration with the manager and chief sanitary inspector—and was seen by thousands of filmgoers.

Propaganda. The use of leaflets and posters as an additional means of spreading information on health matters continues. These are circularised as required to clinics or displayed in public places.

Lecture and Talks—Subject Matter. These were undertaken by a large number of people on the department's staff and varied from subjects as widely differentiated as lectures on poliomyelitis, breast feeding, clean food, first-aid, nutrition, the welfare services of the department. Most of these were given by sanitary inspectors, health visitors and doctors. The personal assistant to the medical officer of health was required to provide lectures on the overall workings of the public health department and the services it provides to such meetings as welfare officers of Government departments in Bristol and at the University to teachers in training. The work of the nutritionist and sister tutor and her deputy in this direction are commented upon elsewhere in this report.

It is fair to report that progress has been made particularly in stimulating group education during 1950, but it is doubtful if health education has yet reached its full status as a major activity of the department's work. There are, of course, many competing demands on the time of officers. Health visitors have a multitude of duties which embrace home visiting, duties as school nurses or clinic sisters at post-natal, ante-natal, infant welfare or special clinics; they are required to write complex reports, to collect data for surveys—and in addition to act as field workers in the forefront of health education. With shortages of staff and of transport across a widespread city the difficulties are enormous and it is hard to avoid the conclusion that a new orientation is necessary if new ground is to be broken and real progress made.

In addition there is a danger of the advances made in the suppression of diphtheria being relinquished by the falling off in immunisation numbers. Similarly vaccination numbers are dangerously low. Standards of personal hygiene are not what they should be as so many cases of food poisoning bear witness. There is need for education in elementary hygiene precautions for those who have to share accommodation with tuberculous relatives who are unable to gain a sanatorium bed. Care of children involves feeding and psychological problems which can be resolved or alleviated by advice and education. A great number of accidents by burning, scalds in the home and at work are avoidable—particularly where very young and old people are concerned. The purpose is a serious one and the opportunity great.

It is sometimes overlooked that home helps are health as well as welfare workers and more attention should be paid to their training in hygiene as far as it affects their work in homes where there is sickness. Midwives should be active health educationalists in group as well as individual education at ante-natal clinics.

When health education is regarded from a community point of view, it is the physical fact that there are too few health workers who have other demands on their limited time which makes the case for group education as a most important method of reaching the general public.

Some teaching is more effective in groups than individually and new and complex details concerning subjects such as smallpox, tuberculosis or diph-

theria, or on the intricacies of the human body, are made more comprehensible by the use of visual aids such as those mentioned earlier. Abstractions do not reach all minds and the power to interest an audience is all important in all teaching.

3. "We Look Before and After"

Looking back over my first full calendar year as the officer responsible for the co-ordination of health education I would say that:

1. It is necessary to establish a degree of subject priorities based on the existing state of knowledge in social medicine.
2. It is vital that a more integrated approach be made to the health education aspects of social problems whether it be concerned with problem families or mentally defective children or disease.
3. It is questionable whether the aims of health education can be seriously reached whilst this problem remains a minor aspect of the work of many who have received special preparation and training for health education group as well as individual. A team of health educators could achieve much if deployed as part of a plan.

Very much more can be done in education as a positive arm to preventive medicine if an attempt is made to reach people in groups, at work, in their social and educational institutions and by actively training other natural educators for work in the enormous field which lies open since preventive medicine was released from the fetters of curative medicine and its purely administrative problems.

The time lost from work by avoidable illness is a burden on the economy of our nation (a drain on the social services), the unhappiness caused by illness in the home through avoidable diseases, like diphtheria and tuberculosis, and the cost of hospitalisation of cases who ought never to have allowed themselves to be caught unprepared by not having vaccinated themselves against smallpox for example, are all positive arguments for health education as an offensive economic and humanitarian weapon.

Health education is a weapon which wielded with courage and vision can reduce disease and suffering still further by reducing its incidence and spread by knowledge of safeguards can alleviate suffering attached to illness and reduce its cost in material terms. In this way it can militate towards producing a community in which the health is regarded as a responsibility to others and knowledge the surest safeguard. Medico-social surveys reveal the scope of social problems but it is health education which makes the more positive, though less discernible, contribution through the slow but sure process of influencing behaviour and leads to healthier habits and fuller understanding which history records as progress.

(II) TEACHING AND TRAINING

By Miss W. Gibb (Sister Tutor)

1. Student Health Visitor

Twenty-four students completed the six months training in March and entered for the examination of the Royal Sanitary Institute. Of these, nineteen were successful—the five failures included two Bristol assisted students, two Somerset Queen's Nurses, and one unassisted student. All these have since qualified and received their diplomas.

Syllabus Changes. Twenty-four students are at present in training and are due to take the examination in March. The syllabus of the Royal Sanitary Institute was altered this year in order to bring teaching up to date and to ensure more uniformity in the training centres throughout the country. The

chief changes were the omission of anatomy and physiology and the inclusion of more lectures on psychology and social medicine, with health education given pre-eminence.

Visits and Instruction. It is almost impossible to carry out the whole syllabus in six months and also give adequate time to practical instruction, since the number of lectures have increased from 98 in 1939 to 132 to date. Observation visits also absorb many teaching hours although they are a necessary means of instruction. Owing to the shortage of experienced trained staff it has been difficult to maintain the standard of teaching in the practical field.

2. Nursery Nurses Training Course

The standard has been maintained throughout the year—more care is now being taken with regard to the selection of students. It is agreed that only the best type of girl should be trained for the care of children, apart from the fact that this training is the most expensive in the country.

Considerable wastage is experienced with regard to this training—fifteen students resigned in their second year and fourteen in the first year. Reasons given included: “ill-health”; “work too hard”; “change of mind”; this may be due to uncertainty of purpose among the young people of the 16–18 age group.

The deputy Sister Tutor, who takes all subjects in the syllabus under “Health,” also visits the nurseries where the students are in training, in order to link up theoretical with the practical work.

Some difficulty is experienced with the training in the care of young babies owing to the limited number of nurseries for the age group 0–6 months. Thanks to the co-operation of private nurseries—Nazareth House and Victoria Gibbs—the difficulty is somewhat relieved temporarily.

In 1950 there were forty-one students who entered the examination of National Nursery Examination Board, of whom thirty-four were successful. The happy co-operation between the health and education departments continues.

3. Pre-nursing Clinic Assistants

This class, which is the responsibility of the deputy Sister Tutor, is held weekly. The students are active and keen. A “block” system of teaching was started in September, 1950, as the former arrangement was not successful. Students, although at various stages in experience and length of service, had previously attended classes at the same time, an arrangement which complicated teaching for the instructor.

These students find the practical work in bedside care useful when they enter hospital.

4. Talks and Demonstrations at Clinics

Arrangements have been made for these to be given monthly at all clinics with the exception of two small clinics. The demonstrations are arranged in co-operation with the domestic service organiser of the Education Department who supplies the teachers. The subjects taken are:

- (1) *Cookery*, the demonstrator acting on the advice of the nutritionist and at the request of the mothers, various dietaries are shown.
- (2) “*Make and Mend*” has lately been introduced and appears to be much appreciated. It is regretted that more mothers cannot be persuaded to attend these sessions. The numbers vary from twenty at a few clinics to two or even one mother. The Education Department has consented to allow these to continue for a further period of a year.

To ensure that as many mothers as possible who are expecting their first baby receive instruction in baby care, three health visitors have been appointed to give this valuable instruction in three ante-natal clinics. In this way many ante-natal sessions are covered. The number of demonstrators being only three previously, it is hoped that more health visitors will be able to assist in this valuable work until more midwives are available to take over so that the whole city can be covered.

5. Talks to Clubs and Guilds, etc.

Requests for teaching in this field of health education has continued throughout the year especially with regard to visits to the Central Clinic.

The number of people contacted by the Sister Tutor was 820.

Courses of lectures in home nursing and parentcraft have been arranged by request and given at Clifton High School. The lectures on home nursing were given by the district nurses whose co-operation was sought.

7. DIPHTHERIA IMMUNISATION & VACCINATION

Diphtheria Immunisation

NUMBER OF CHILDREN WHO COMPLETED A FULL COURSE OF PRIMARY IMMUNISATION IN THE AUTHORITY'S AREA (including temporary residents) IN THE 'SIX-MONTHS PERIOD INDICATED.

	Age at date of final injectn.		Total
	Under 5	5 to 14	
Six Months ended 31st December, 1948	3,390	147	3,537
Six Months ended 30th June, 1949 ...	2,667	601	3 268
Six Months ended 31st December, 1949	2,576	268	2,844
Six Months ended 30th June, 1950 ...	2,525	187	2,712
Six Months ended 31st December, 1950	1,710	95	1,805

Vaccination

NUMBER OF PERSONS VACCINATED (or re-vaccinated).

	Age at 31st Dec., 1949 i.e., born in years ...	Under 1 1949	1 to 4 1945-48	5 to 14 1935-44	15 or over Before 1935	Total
1949	Number vaccinated ...	428	414	75	231	1,148
	Number re-vaccinated...	44	41	33	372	490
	Age at 31st Dec., 1950 i.e., born in years ...	Under 1 1950	1 to 4 1946-49	5 to 14 1936-45	15 or over Before 1936	Total
1950	Number vaccinated ...	486	675	191	302	1,654
	Number re-vaccinated...	76	123	95	695	989

8. AMBULANCE SERVICE

The following is an extract from the Chief Fire Officer's Annual Report, 1950:

Organisation and Control

The original arrangements made for the operation and control of the Ambulance Service continued to function smoothly, and no alterations were necessary during the year.

Agency Arrangements

(a) *Women's Voluntary Services—Hospital Car Service*

This organisation continued to render excellent service throughout the year, and handled a total of 16,299 cases. The methods established whereby transport requests are passed by Ambulance Control to this organisation are working satisfactorily and have proved beneficial both to the Hospital Car Service and the Ambulance Service.

(b) *City and Marine Ambulance Corps*

Due to the sustained demand upon the Service it has not been possible to dispense with the services of the City and Marine Ambulance Corps, which continued to place vehicles at the disposal of the Service and handled a total of 3,755 cases.

(c) *Avonmouth Docks Ambulance*

The number of cases to which this ambulance responded in the dock area was 434, and in addition dealt with 28 cases outside this area.

(d) *Rail Travel*

The excellent facilities and co-operation of the British Railways have enabled the Service to increase considerably the number of patients sent by rail. Details of the facilities offered have been circulated direct to all Hospital Management Committees and Doctors, through the office of the Medical Officer of Health, and it is thereby hoped to reduce the number of occasions upon which ambulance transport is utilised to send patients on long-distance journeys out of the city.

Mutual Aid

The co-operation established with adjoining Local Health Authorities has been maintained and, whenever practicable, full use has been made of ambulances and cars belonging to other Authorities for the conveyance of patients discharged from Bristol Hospitals to places outside the city boundary. Close liaison with adjoining Authorities has enabled a considerable number of cases under the "continued need" arrangement to be returned to the area of the sending Authority by vehicles belonging to that Authority, thereby saving mileage and the use of ambulances.

The extent to which the Ambulance Service is engaged on behalf of other Authorities may be gauged from Table 1.

Table 1.

**Cases dealt with on behalf of Somerset and Gloucester under
Agency Agreement**

		Somerset C./C.		Gloucester C./C.		Combined total	
		Number of		Number of		Number of	
		Cases	Mileage	Cases	Mileage	Cases	Mileage
January	.....	104	2,076	200	3,112	304	5,188
February	.....	112	2,071	209	2,661	321	4,732
March	.....	114	2,077	193	2,482	307	4,559
April	.....	73	1,392	179	2,290	252	3,682
May	.....	113	2,079	222	2,792	335	4,871
June	.....	120	1,711	183	2,481	303	4,192
July	.....	108	1,715	202	2,638	310	4,353
August	.....	126	2,123	182	2,448	308	4,571
September	.....	90	1,626	172	2,058	262	3,684
October	.....	153	2,492	170	1,988	323	4,480
November	.....	150	2,464	204	2,538	354	5,002
December	.....	152	2,728	178	2,149	330	4,877
TOTAL	.....	1,415	24,554	2,294	29,637	3,709	54,191

Ambulance Fleet

At the commencement of the year 26 ambulances and eight sitting case vehicles were available, and during the year delivery was taken of six new ambulances and three sitting case vehicles. As three ambulances were scrapped as unserviceable, the fleet at the 31st December consisted of 29 ambulances and 11 cars.

Statistics

The total number of cases handled by the Service during the year was 110,824, an increase of 20,110 as compared with 1949. The daily incidence of these calls is shown in Appendix I to this report, and the accompanying graph shows that although during March the number of cases per month exceeded 10,000 for the first time, the progressive increases which have previously been reported have now ceased, and the monthly average figure for 1950 was 9,235.

Table 2 provides a summary of cases handled each month, and also indicates the extent to which co-operation was received under agency arrangements. As compared with 1949 the total number of cases conveyed by the Service itself increased by 24,675, whereas those conveyed by agency services were approximately the same as the preceding year, except in the case of patients conveyed by rail. With the co-operation of the hospital authorities the number of patients sent long distances by rail increased from 138 in 1949 to 249 in 1950, which represented a considerable saving in both time and expense.

Table 2
Monthly Summary of Cases

1950			Ambulance Service	City & Marine	W.V.S.	Rail	Total
January	.....	.....	7,176	338	1,455	24	8,993
February	.....	.....	7,173	337	1,602	26	9,138
March	.....	.....	7,812	299	1,925	16	10,052
April	.....	.....	6,947	281	1,457	19	8,704
May	.....	.....	7,830	315	1,342	17	9,504
June	.....	.....	7,806	298	1,349	21	9,474
July	.....	.....	7,796	289	1,432	26	9,543
August	.....	.....	7,416	301	1,471	20	9,208
September	.....	.....	7,301	352	1,130	13	8,796
October	.....	.....	7,543	317	1,220	22	9,102
November	.....	.....	7,987	270	928	38	9,223
December	.....	.....	7,689	358	988	52	9,087
TOTALS	.....	.....	90,476	3,755	16,299	294	110,824

As usual, the greatest demand for transport arose from general removal, hospital and clinical treatment cases, as may be seen from Table 3, which classifies cases according to their nature. Accidents show an increase of 605 and maternity cases an increase of 47, while infectious disease cases are reduced by 162 in comparison with 1949.

Table 3
Monthly Summary and Classification of Cases

1950			Accident and Sudden Illness	Maternity	Infectious	General	Total
January	.....	.....	411	324	133	8,125	8,993
February	.....	.....	398	319	125	8,296	9,138
March	.....	.....	468	352	131	9,101	10,052
April	.....	.....	508	339	92	7,765	8,704
May	.....	.....	576	345	118	8,465	9,504
June	.....	.....	613	350	129	8,382	9,474
July	.....	.....	618	352	143	8,430	9,543
August	.....	.....	536	346	162	8,164	9,208
September	.....	.....	500	319	210	7,767	8,796
October	.....	.....	494	288	142	8,178	9,102
November	.....	.....	454	304	128	8,337	9,223
December	.....	.....	557	323	116	8,091	9,087
TOTALS	.....	.....	6,133	3,961	1,629	99,101	110,824

The increase in the number of cases handled during the year was not accompanied by a comparable increase in mileage, as total mileage only increased from 896,703 during 1949 to 919,361 in 1950. The improvement which was effected may be gauged from the fact that the average mileage per case for the year 1950 was 8.3 as compared with 9.9 for the preceding year. This reduction was largely achieved by district grouping of patients requiring conveyance, thus ensuring as far as practicable full loads both to and from hospitals in the city.

III

ENVIRONMENTAL HEALTH SERVICES

1. Sanitary Circumstances.
2. Shops and Young Persons Employment Acts.
3. Metereological Observations.
4. Public Analyst's Report.

SANITARY CIRCUMSTANCES, HOUSING AND INSPECTION OF FOOD

By F. J. Redstone (*Chief Sanitary Inspector*)

1. SANITARY CIRCUMSTANCES

This report indicates the comprehensive nature of the duties carried out by sanitary inspectors and it will be clearly seen that while the major part of the work consists of problems associated with general sanitation, there is now a considerable increase in time and attention given to the wider aspects of environmental hygiene, particularly in connection with the inspection of food and food premises.

A perusal of health reports published many years ago discloses the scope of duties then undertaken, but new developments demand that existing duties be carried out more efficiently and place new responsibilities in the realm of environmental health matters upon the inspectorate. Every effort is made in this city to compile adequate departmental records of the work carried out, but it will be appreciated that the results cannot be gauged simply by statistical detail, valuable as this may be, but rather by the satisfaction given to the general public and the health committee of work done as thoroughly as present circumstances allow.

During the year under review, the Bristol Corporation Act 1950 was passed. For some time a file had been kept on matters of public health importance which needed amendment or strengthening in law, and it is with considerable pleasure that one is able to report the granting of amendments and improvements in the law regarding matters of general sanitation and food control.

These additional powers require that closer attention be paid to various types of premises, and full details of the progress made in this connection will be given in the next annual report.

Examination successes during the year by Officers of the Section.

The following further qualifications were obtained by officers of the section during the year:—

Royal Sanitary Institute: Certificate for Inspector of Meat and Other Foods—
A. W. ADAMS.

Royal Sanitary Institute: Certificate for Inspector of Meat and Other Foods—
G. E. BENNETT.

Royal Sanitary Institute: Certificate for Inspector of Meat and Other Foods—
W. J. GETHING.

Royal Sanitary Institute: Certificate for Inspector of Meat and Other Foods—
E. W. KNOWLES.

Royal Sanitary Institute: Certificate for Inspector of Meat and Other Foods—
E. H. WAKEFIELD.

Diploma of Public Administration, London University—D. G. BECK.

Papers given at National Conferences:

1. The Sanitary Inspectors' Association Conference at Bridlington: "FOOD HYGIENE," by R. WILLIAMS.
2. The National Smoke Abatement Society Conference at Margate: "THE SMOKELESS FUELS SITUATION," by F. J. REDSTONE.

Office Administration

The reduction in 1947/1948 and 1949 in the numbers of complaints received by the department continued its downward trend this year, the total for 1950 being 4,902. While complaints were seventy less than last year, the number of visits and statutory notices served in connection with them showed substantial increases. Visits numbered 39,040 (an increase of 4,526), and notices totalled 1,908, which was 437 more than in 1949.

Of the notices served 437 only were not complied with and a rather unusual coincidence is noted in that the total of notices complied with in 1950 is exactly equal to the number of notices served in 1949.

Supervision of work done under notice calls for an adequate number of visits and, for the first time for many years, it was possible this year to give this aspect of the work more attention. Moreover, efforts are now in hand to catch up on the tremendous arrears of other work created by extreme shortage of staff. Factories, workplaces, offices, shops, offensive trades, places of public entertainment, refreshment houses, etc., are all in need of more frequent attention. These, and many other matters, must be tackled in the comparatively near future and it is to be hoped that, within the limitations of existing staff strength, improvements may be effected.

Local government departments have been reduced in strength for some years and it is imperative that our losses to other services be made good now, unless we are prepared to accept the criticism that local authorities are indifferent to their responsibilities. Such a state of affairs could not be more disastrous to any section of local government work than to the health department which is the first line of defence for the well-being of the people.

Improvements to remedy the cramped conditions under which the clerical and technical staff have to operate is under consideration. One aspect of this problem which gives rise to immediate concern is the lack of facilities for interviewing members of the public, owners of property, contractors, and others, with whom business has to be transacted. In any future rearrangement of the office accommodation it is considered that suitable facilities must be made available for these interviews.

Visitors from Foreign Countries

Bristol has taken a very active part in the reception and instruction of important foreign visitors to this country who seek information on public health administration. This department has been visited by representatives from China, Brazil, British Guiana, France, Italy, Singapore, Iraq, Sudan, Germany and, nearer home, from Eire.

While, in the main, it has been a question of the visitors seeking knowledge, the arrangement has not been without advantage to us in that we have obtained very many interesting and valuable insights into conditions as they exist abroad.

The British Council of Social Service and the Ministries of Health and Food have indicated their appreciation of the work done by the department in this respect.

Repairs to Property in Owner's Default

Seventeen properties which had not been completed under the arrangements for repair of property in owner's default, were carried forward to this year. Ten were in the course of repair and seven had not been started. A further thirty-three properties were referred to the defaults section during the current year, making a total of fifty properties which were under consideration. These were dealt with as shown below:—

20 repaired by Corporation's contractor.

14 repaired by owners after the cases had been referred to defaults section.

7 were not proceeded with for various reasons.

At the end of the year a total of nine properties remained outstanding, made up as follows:—

3 in course of repair by Corporation's contractor.

6 had been inspected but defaults action not yet put in hand.

During the year eighteen orders were issued to the various Corporation's contractors, and accounts to the order of £1,437 3s. 4d. were passed for payment.

In the year under consideration the number of cases referred to the defaults section for action continued to decline; an all-round decrease of one-third on the figures given for 1949. It is interesting to note, however, that notwithstanding the decrease in cases in which work was carried out, the amount of money paid to contractors rose, and it must be assumed that this factor is due mainly to the increasing costs of labour and material.

Work by Agreement under Section 275, Public Health Act 1936

During the year the department continued to receive requests from property owners that works to comply with notices served should be carried out by the Corporation's contractor on an agreement basis.

Two cases were in course of completion at the end of 1949 and four were considered by the defaults section during the current year. Of these six cases, three were completed during the year at a cost of £426 2s. 4d., and the position in the remaining three cases is as follows:

1 In course of completion

1 Approved by the health committee and the owner's signature to the agreement awaited

1 Not considered suitable for this type of action.

SANITATION, HOUSING, SHOPS ACTS, ETC.

Sanitary Inspectors.

1949				1950		
Visits	Re-visits	Total		Visits	Re-visits	Total
—	—	4,972	Complaints received	—	—	4,902
—	—	214	Recommendations for Housing accommodation	—	—	151
5,146	19,566	24,712	Visits—	5,397	22,895	28,292
1	1	2	Dwelling houses (P.H.)	8	125	133
19	15	34	Houses let in lodgings	11	20	31
15	14	29	Common lodging houses	31	16	47
451	1,245	1,696	Foodshops—Registerable	577	1,656	2,233
144	561	705	Not registerable	107	446	553
33	178	211	Other shops	61	221	282
88	335	423	Bakehouses	102	389	491
119	197	316	Workplaces and Offices	98	322	420
300	699	999	Factories—Non-mechanical	293	741	1,034
13	8	21	Mechanical	17	9	26
10	21	31	Outworkers	15	52	67
15	66	81	Removal of Aged Persons	29	175	204
6	13	19	Smoke observations	17	24	41
33	102	135	Offensive trades	19	80	99
13	66	79	Entertainment places	20	51	71
57	124	181	Tents, Vans and Sheds	54	192	246
355	157	512	Keeping of animals	408	166	574
1,912	2,406	4,318	Food inspection	1,511	2,393	3,904
—	—	20	All other matters	—	—	292
—	—	—	Infectious diseases	—	—	—

In-tima-tion		Compliance			In-tima-tion		Compliance	
Statu-tory		I.	S.		Statu-tory	I.	S.	
1,430	1,470	1,351	1,060	Notices—	1,399	1,521	1,601	1,456
—	—	—	—	Dwelling houses (P.H.)	9	7	5	7
—	—	—	—	Houses let in lodgings	2	—	3	—
—	—	1	—	Common lodging houses	—	—	—	—
110	1	85	6	Foodshops—Registerable	158	3	148	3
39	—	52	6	Not registerable	30	—	25	4
6	—	5	1	Other shops	13	—	8	—
5	—	9	1	Bakehouses	11	—	7	—
30	—	12	—	Workplaces and Offices	26	—	34	—
56	—	67	—	Factories—Non-mechanical	58	2	57	—
—	—	—	—	Mechanical	—	—	—	—
—	—	—	—	Outworkers	—	—	—	—
—	—	—	—	Removal of aged persons	—	—	—	—
—	—	—	—	Smoke observations	1	—	1	—
—	—	—	—	Offensive trades	—	—	—	—
3	—	1	—	Entertainment places	2	—	1	—
1	—	—	—	Tents, Vans and Sheds	—	—	—	—
2	—	6	1	Keeping of animals	8	—	6	—
19	—	24	—	All other matters	17	1	20	1

Remedial Action.

1949		1950
	<i>Drainage Works—</i>	
6	New drains laid	33
412	Drains repaired	403
549	Choked drains cleared	509
144	Tests made	110
	<i>Sanitary Conveniences—</i>	
181	Flushing appliances introduced	68
27	Additional closets fitted	18
11	Separate closets for sex provided	7
194	New pans fitted	111
15	Action re bathroom and geyser vent	18
11	Urinals fitted	4
330	Other works	704
65	Intervening vent space provided	31
—	Cesspools abolished	23
	<i>Water Supplies—</i>	
47	New and additional installation	16
54	Hot water installed	100
—	Wells closed	1
	<i>Other Sanitary Fittings—</i>	
74	New sinks fitted	91
4	Additional sinks provided	3
30	Wash basins provided	12
	<i>Other Works—</i>	
732	Roofs repaired	814
415	Dampness remedied	401
2,696	Other new and repair works	3,414
1	Yards paved and drained	3
76	Houses cleansed—Dirty	58
152	Verminous	104
1	Food store installed—cooking facilities improved	3
34	Lighting improved	4
61	Ventilation improved	17
2	Meal rooms provided	1
7	Heating provided	9
2	Exhumations	1
	<i>Keeping of Animals—</i>	
1	Removal of manure	3
3	Provision of manure receptacles	3
—	Drainage provided	—
	<i>Aged and Infirm Persons—</i>	
9	Removals—Voluntary	8
—	Court order	1
	<i>Smoke Observations—</i>	
17	Infringements—Found	12
17	Remedied	12
	<i>Noise—</i>	
15	Nuisances—Found	7
15	Abated	7
	<i>Other Nuisances—</i>	
355	Found	165
355	Abated	165

(ii) HOUSING

References to the activities of the department, in connection with housing conditions have, in previous annual reports, underlined the difficulties which have faced the city council in carrying out their statutory obligations under the Housing Acts.

The year under review has seen no reduction in these difficulties; indeed, in some respects the problems have increased. Every effort has been made to secure reasonable housing conditions in this city and whilst there has been limited use of the Housing Acts for general repairs in appropriate cases, the majority of unsatisfactory conditions have been dealt with under the nuisance clauses of the Public Health Act.

This policy does not mean that general deterioration of dwelling houses is arrested to any appreciable extent, with the result that there are many thousands of houses which, if not repaired, will fall into such a state that they will rapidly qualify for inclusion in clearance areas.

It will be noted from the figures given with this report that the number of unfit properties dealt with are less than the preceding year; in fact, the number of demolition orders made have been reduced by one half and some of the difficulties associated with housing action can be assessed from the following figures:

Houses represented for action under sections 11 or 12 of Housing Act 1936, but not yet viewed by housing committee	96
Houses inspected with a view to action under section 11 or 12, but not yet represented to housing committee	65
Houses subject to clearance orders made before the war but still occupied	141
Houses subject to clearance orders made before the war—void but still standing	143
Houses subject to demolition orders but still occupied	82
Houses subject to demolition orders—void but still standing	95
Houses and parts of buildings subject to undertakings not to use and closing orders, still occupied	46

Some owners, when requested to undertake major works of repair and reconstruction have, because of cost involved, offered their properties to the city council at nominal figures and sometimes as a 'gift'. To acquire and save a house, notwithstanding the cost of works necessary to property already old, or to demolish and rehouse the occupants, is no easy decision to take, but the general policy has been to consider such offers. Present indications are that the numbers so dealt with are likely to increase.

Housing Acts.

1949		1950
—	<i>Inspections—</i>	—
120	Section 9	121
—	„ 11 and 12	—
—	Clearance area	—
—	<i>Represented to Committee—</i>	—
120	Section 9	121
—	„ 11 and 12	—
—	Clearance area	—
65	<i>Orders Made—</i>	—
7	Section 11 (demolition)	35
7	„ 12 (closing orders)	7
4	„ 11 (undertakings to repair accepted)	3
1	„ 11 (undertakings not to use accepted)	6
—	„ 11 (closing orders—Sect. 3, Housing Act, 1949)	—
—	<i>Houses Repaired—</i>	—
—	Section 9—Informal	—
—	„ 9—Formal	—
—	„ 9—Formal by Corporation in default	—
4	Undertakings to repair	6
1	Undertakings not to use cancelled after repair	1
3	Other repairs	12
27	Rent Certificate issued	10

<i>Section 15—Appeals against Demolition Orders</i>	Withdrawn	5
	Hearing pending	1
<i>Section 155—</i>		
Recovery of possession	Orders obtained	7
Hearing pending		2

Progress in Housing

In the last annual report the housing survey work of the department was outlined. This survey work has now borne fruit in that the department has been able to lay before the housing committee comprehensive statistical information regarding conditions in collective areas and the scattered insanitary houses of the city.

The task of trying to deal with the very worst houses by means of individual demolition or closing order action proceeded as in previous years, but it was realised that, unless a more satisfactory line of action could be taken, our efforts to cope with unsatisfactory houses would be negated by the decay developing in an ever-increasing number of properties.

The work of finding an answer to the housing problem is not a "one department job." During the year the chief officers, particularly the town clerk, city planning officer, housing manager and medical officer of health, met on several occasions to formulate ways and means of dealing with the serious housing situation. As a result of these deliberations the officers concerned presented a combined report to the housing committee.

This report gave the estimated number of dwellings in the city requiring housing action and included a summary of localised surveys carried out in the blighted areas of Bristol. The detail contained in the report demonstrated that the housing problem fell under three main headings:

- (a) Large areas of bad housing which could be best dealt with by re-development.
- (b) Large numbers of insanitary houses scattered throughout the city for which individual housing action would be most appropriate.
- (c) Properties which are becoming obsolete but which must be given a protracted life in order that the priority housing programme may proceed.

The housing committee considered these reports and accepted the following recommendations:

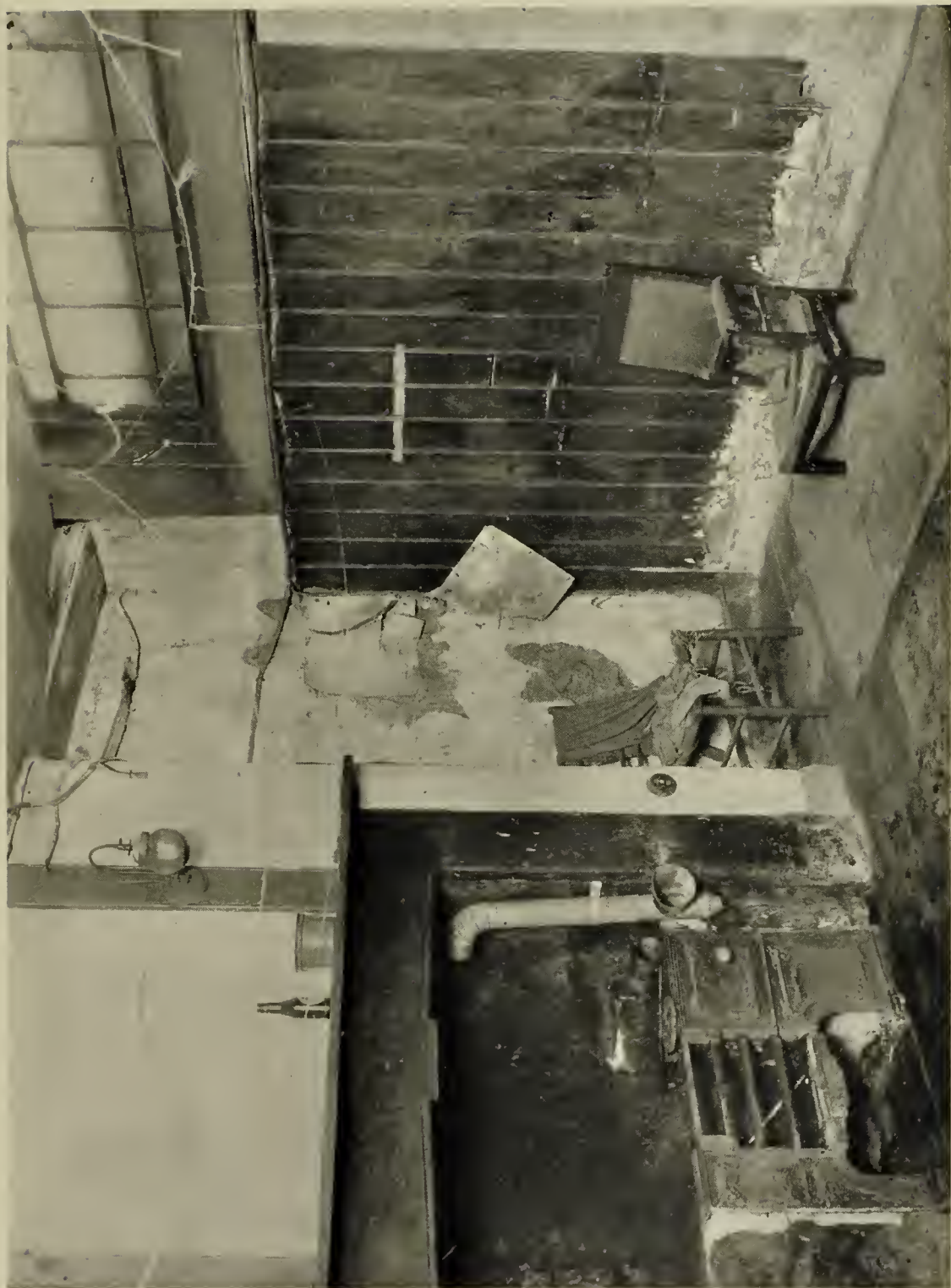
- (i) That each year one hundred houses out of the two thousand new dwellings allowed annually for the housing programme be allocated to the medical officer of health's department for rehousing of families from individually unfit houses.
- (ii) That each year a further two hundred dwellings be allocated so that a degree of redevelopment may be started in the larger areas of worn-out property, and
- (iii) That the town clerk be asked to bring forward a report on the possibility of acquiring areas of houses that are falling into disrepair with the object of carrying out works necessary to keep them in habitable condition until there is a possibility of rehousing.

It was further agreed that, at a later stage, as work proceeds on the redevelopment of main areas, a further allocation of three hundred houses would be made for slum clearance purposes.

When it is realised that there are something like 4,500 insanitary dwellings of priority class in the city and further thousands which, under present circumstances, will, over a period of years, qualify for a like classification, it will be seen that the problem is indeed of very serious proportions.

Underground Rooms

Among the problems associated with housing is the "underground room" used for human habitation, and the undulating nature of our city has resulted in Bristol having rather more than its fair share of this type of accommodation.



(1) UNDERGROUND ROOM.

This dark, damp and ill-ventilated underground room, used for human habitation, now closed under Section 12, Housing Act 1936. (Note pavement level—
photograph by flashlight).

An underground room, according to the Housing Act, 1936, is a room the surface of the floor of which is more than three feet below the surface of the part of the street adjoining or nearest to the room, or more than three feet below the surface of any ground within nine feet of the room.

This definition, whilst seemingly straightforward, has resulted in more variation of interpretation than almost any other legislative matter contained in the Housing Act, 1936, and regulations regarding angles of light, ceiling height, construction of floors, open areas adjoining such rooms, etc., have done little to clarify the position as to whether rooms which appear to be "underground rooms" are, in fact, rooms of that nature under the Housing Act.

Everyone is familiar with this class of room but the different types must be seen to be appreciated. The most common class of underground room is to be found where houses are built on ground which slopes away from the road and here the front rooms on the lowest floor are invariably underground rooms. The rooms on the same level at the rear, because of the fall of the land, are usually at ground level and, therefore, do not necessarily constitute underground rooms. Next we have sloping ground with streets built along the contours. In this case on one side we may have an underground room at the rear due to the proximity of ground adjoining, whilst on the opposite side of the street, the front room of the lowest floor is underground because it is below street level. Again, due to steeply rising ground, there are instances where one has to ascend steps to reach the underground room and once inside the house, stairs have to be negotiated to reach the ground floor. The room on the lowest floor, because it is built into the ground and the rear room of the ground floor because it is three feet below the level of the rising land, are both underground rooms even though they are on different levels. Many more types of underground rooms could be instanced but one further example will suffice. It is the case where a house is built on ground which falls precipitously away from street level. Here it is possible to find a house constructed of two storeys and an underground room in the front, whereas at the rear the house consists of three storeys and an underground room.

The original purpose for which many of these underground rooms were built form a guide as to whether they were intended for human habitation. The extent to which they can be made to comply with the regulations determines whether they can be made into habitable rooms.

Many houses fronting directly on to the pavement have underground rooms with small windows at street level (see photograph (1)). It will be obvious that such rooms cannot be made fit for human habitation since sufficient window area, coupled with the required angle of light, cannot be provided, nor can an open area be formed in front of the window since this would involve encroachment of the pavement. Where houses with underground rooms have a forecourt, it is possible to bring the rooms up to standard by excavation of the ground, paving and draining the open areas and enlarging windows. Inside the rooms, the use of vertical and horizontal damp-proof courses, provision of solid floors or board floors with oversite concrete and, in some cases, dropping the level of the floor to give the necessary ceiling height, are methods which can be employed to make the rooms comply with the regulations. Laying land drains often assists in drying the site of underground rooms.

It will be apparent that making such rooms fit for human habitation can be, in poorer type properties, an uneconomic proposition since in many cases very extensive and expensive work is required to make one underground room fit for occupation.

Underground rooms fall into many use categories. In some cases they are used as separate accommodation for a family. In others the rooms are used in conjunction with accommodation on the floors above. Again, underground rooms may be adapted as sculleries and, lastly, the occupiers, because of the condition and levels of the rooms in relation to the street or adjoining ground, may have abandoned the use of the rooms for human habitation and converted them into fuel stores.

Recent surveys carried out in specific areas have shown that in one area of 960 acres there were 1,010 underground rooms and, in another area of similar size, there were 1,376 such rooms. When it is realised that Bristol covers an area of something like 25,909 acres and that 1,920 acres within that area have a total of 2,386 underground rooms, the extent of the problem will be understood.

Present-day circumstances, such as the insufficiency of dwellings to meet the housing demand; the restriction on the extent of house action; and features such as cost and reasonableness, saddle the public health department not only with the duty of deciding which rooms are "underground rooms", but also with the problem of keeping such rooms in a reasonable state.

The duties of the chief sanitary inspector's department, in relation to underground rooms, are: (a) the closing of those rooms which are wholly unfit and unsuitable for human habitation, thereby preventing re-occupation, and (b) enforcing such repairs and improvements as are vital if occupation is to be continued.

Whilst there are special difficulties due to the fact that underground rooms cannot, in these difficult times, be dealt with under normal housing procedure, it should be pointed out that efforts are made to alleviate the lot of those who dwell in this form of accommodation and the department is encouraged by the fact that when redevelopment of some of the more blighted parts of the city begins, it will see the end of many of the worst underground rooms at present in use for human habitation.

Tents, Vans and Sheds

From time to time difficulty is experienced with regard to the siting of caravans and tents used for human habitation within the city boundary and, whilst no measures are taken which would interfere in any way with the legitimate camper, close watch has been exercised over this matter to prevent the establishment of the semi-permanent shack or fixed structure which is responsible for many objectionable features from the public health point of view.

In the absence of a firm policy for dealing with this problem, it is clear that the housing shortage would have encouraged some families to form colonies of temporary dwellings in this city. It is to be noted that, apart from the sites used by bona-fide showmen, only two single caravans were used for human habitation as a temporary measure during the year.

(iii) INSPECTION OF MEAT AND OTHER FOODS

Meat Inspection

A total of 119,242 carcasses of meat were inspected at the Gordon Road Abattoir, Hotwells Lairs, bacon factories and various other institutions in the city. The quantity of meat found unfit for human consumption and condemned amounted to 468 tons, which was 36 tons more than last year. Trouble arising from bone taint was, fortunately, less this year, while the incidence of the parasitic infestation of beef by cysticerci remained about the same, 237 animals being affected out of 25,319 examined, which represented



(Photograph: "Bristol Evening Post").

(2) MECHANICAL SAW (HOTWELLS LAIRS).

To cut through the spinal column of the carcass by hand method takes 15 to 20 minutes, whereas this power-driven saw does the job in one to three minutes and eliminates a serious hold up in the through-put of animals.

0.94%. Notification of all cases of carcasses found to be infested with *cysticercus bovis* was sent to the local authorities from those areas where the infected animal originated. This action has resulted in a considerable amount of cleaning up being done on farms and pastureland suspected of being the source of infestation. It was intended to discontinue this practice of notification at the end of this year in view of the difficulty of obtaining national guidance on the measures which can be taken to control this infestation. The termination of our information to the outside authorities was suspended meanwhile, as it is now understood that the Ministry of Health have before them a report on this subject. No doubt in the near future the Ministry will give local authorities the benefit of their advice on the problem.

Mechanisation. At both slaughter houses mechanical carcase saws have been introduced during the year, together with mechanisation of the manually operated hoists. These improvements will considerably reduce the manual effort involved and should be a great assistance to increasing the through-put of animals dealt with in the city. The saws mentioned are a Bristol invention of an employee on the slaughtering staff at Hotwells Lairs, where experimental work in this connection has been in progress for about two years. The advantage of these saws is twofold; they enable a carcase to be sawn right through the vertebral processes in about one minute whereas sawing by manual means took anything up to twenty minutes; the surfaces of the sawn portions of a carcase are smooth and of better finish than the hand method. This sawing was an operation which created a serious bottleneck in the work of slaughtering and preparing animals for human consumption. With the use of the saw the bottleneck is removed.

Meat Transport and Handling. Special investigations have been carried out regarding conditions under which meat had been handled and transported in the city. Compared with the conditions existing in other parts of the country, the standard in the city was found to be reasonably good, but there is room for still further improvement. New vans are becoming available and they are constructed on modern lines with suitable metal lining on the interior and provided with the necessary equipment to enable the meat to be hung up during its transport to the retailers. The maintenance of clothing of meat handlers at the various depots and on the vans still remains a problem in view of the difficulties of supply and the poor quality of the garments now available. Nevertheless close supervision is being exercised to ensure that every effort is made to make the best of clothing, equipment and premises available.

Inspection of Meat and Other Foods.

1949		1950
	<i>Visits—</i>	
491	Meat Markets	517
5,603	Shops	4,778
6	Cattle Markets and Railway Sidings	—
—	Fish curing premises	—
19	Sausage making premises	—
5	Cold Stores	12
455	Connection with food poisoning	188
—	Street traders	1
49	Institutions	38
1,830	Slaughterhouses	1,738
	<i>Remedial Action—</i>	
—	Slaughterhouses cleansed	—
—	Slaughterhouses rebuilt, repaired or altered	—
—	Sanitary defects, etc.	—

1949			1950	
City	Abattoir		City	Abattoir
9,472	11,558	<i>Animals examined</i>	11,731	13,588
197	99	Beasts	273	197
29,373	30,516	Calves	27,457	29,489
53	2,446	Sheep	257	1,187
730	—	Pigs	1,635	—
30,380	—	Pigs (Imported)	33,423	—
—	23	Bacon	2	—
		Goats	—	3
300	419	<i>Carcases destroyed—</i>	243	425
4	11	Beasts	4	6
43	35	Calves	60	47
64	51	Sheep	108	24
—	—	Pigs	—	—
		Goats		

1949		1950
Tons		Tons
	<i>Meat destroyed from—</i>	
219	Slaughterhouses and shops	217
213	Abattoir	251
—	Cold Stores	—
132	Fish, Poultry, Vegetables, etc.	123½

CARCASES INSPECTED AND CONDEMNED, 1950

95

	Cattle excluding Cows	Cows	Calves	Sheep and Lambs	Pigs	Goats
Number Killed	25,319		470	56,946	34,867	5
Number Inspected	25,319		470	56,946	31,867	5
All diseases EXCEPT Tuberculosis. Whole carcasses condemned	116		6	107	22	—
Carcasses of which some part or organs were condemned.	16,244		10	14,351	1,151	—
Percentage of the number inspected affected with disease other than Tuberculosis	64.15%		2.13%	25.2%	3.30%	—
<i>Tuberculosis Only</i> Whole carcasses condemned	552		4	—	110	—
Carcasses of which some part or organ condemned	5,794		4	—	1,585	—
Percentage of the number inspected affected with tuberculosis	22.8%		.8%	—	4.54%	—

Fish Inspection

Daily inspection of fish arriving at the markets has been systematically carried out, the amount condemned (approx. 18 tons) comparing favourably with an amount of 24 tons condemned last year, which represent a 25% reduction.

The department has been thanked by the trade for the arrangements that have been made to enable the fish to be inspected in the early hours of the morning which is an insurance against unfit fish being sent out to retailers.

Improvements have been noticed in the "wet fish" trade and one of the most important features in this aspect was the introduction of improved types of fish containers. These boxes are being fitted with non-rust metal linings. The latest type of all is a white enamel lining fitted with a metal lid which renders nailing up of the box unnecessary. Cleansing of such containers is made considerably easier and more efficient and nuisances from this source are therefore rapidly reduced.

Public Abattoir, Whitehall

While the total number of animals slaughtered at the abattoir during the year was approximately the same as during recent years, the number of cattle dealt with was greater by about two thousand and the need for extension of the premises became an urgent matter.

During the peak period from July to September the cattle lairages were full and for this reason it was frequently necessary for the Ministry of Food to divert consignments of livestock to other areas. The cooling hall facilities were also used beyond normal capacity and the carcasses placed so close together that, even with artificial ventilation provided by extractor fans, cooling of the meat was inadequate, particularly during the very warm weather.

This use of the abattoir beyond its normal capacity was brought to the notice of the health committee during the year and following discussions with the Ministry of Food it was decided to prepare a scheme for the extension of lairage and cooling hall accommodation. These proposals were discussed with the Ministry of Food, slaughtering section, who pointed out that new ideas on slaughtering technique had been adopted at an existing slaughterhouse in Reading and that models of abattoirs could be inspected at Guildford; the health committee subsequently decided to send a deputation to Reading and Guildford. This visit proved of great interest and, as the year closed, an agreed scheme to rearrange the slaughtering facilities to increase lairage and cooling hall accommodation, and to provide improved office facilities for the meat distributive staffs, was being prepared.

During the year, a complete inspection and test of all lifting gear at the abattoir was carried out. The tests applied to the hoists and other equipment revealed that certain modifications and supports were necessary; these defects have now been remedied and all equipment certified as safe and satisfactory for the work performed.

A greatly improved method of collection and disposal of inedible offal and other waste material was arranged during the year. The attention of the health committee was drawn to the fact that containers provided by the collecting firm were unsatisfactory and, further, that they were not cleansed to the standard required for a food premises before being returned to the abattoir. Continuous attention was drawn to this matter but, as little improvement resulted, the chief sanitary inspector recommended that the health committee obtain suitable galvanised containers with covers for the storage of this material. When these containers are full, material is tipped into a specially

constructed tank, fitted into the collector's lorry. This has brought about an improvement in that the abattoir staff keep the galvanised containers clean and covered, thereby preventing accumulations of offensive material and fly nuisance from this source.

(IV) MILK AND FOOD INSPECTION.

Registrable Premises

The department has been quite heavily engaged during the year in dealing with applications for registration by butchers and cooked meat and shellfish dealers and, on the whole, the city now possesses a very good standard of premises used for these registrable trades. The emphasis now is on education of the personnel in proper methods and practices. The health committee's decision to include fried fish shops within the scope of Section 14 brings another 155 premises into the registrable classes; this decision should lead to some general improvements in the standard of hygiene in this trade.

During the year a total of 69 fresh registrations were granted as against 61 during 1949. Most of these have been in connection with butchers' premises or cooked meat vendors, but six have been in regard to the cooking of shellfish. In only one case was the granting of a registration refused. The trader concerned was reluctant to give up a small basement room, but afterwards adopted the arrangement of his premises as advised by this department and now has one of the best preparation rooms in Bristol.

During the year the general position as to these registrable premises was reviewed and it was agreed by the committee that sufficient time had been given to the traders concerned to secure registration of the premises used for these purposes. The committee, therefore, authorised the issue of a public notice in the local press as a final warning that it is an offence to use premises which are not registered.

On the 28th of September an employee was discovered manufacturing sausages on unregistered premises under unsuitable conditions without his employers' knowledge. This firm has six retail shops in the town and had provided a modern meat products factory at other premises. Legal proceedings were taken in this instance against the employee and a fine of £5 imposed.

The publication of the report of the manufactured meat products working party appointed by the Minister of Food was made in November and marks a step forward in the official recognition of a standard of hygiene for these premises which will undoubtedly be a useful contribution to the cause of the clean food campaign. It is pleasing to note that many of the points now established in Bristol are incorporated in the report. The precautions to be taken in the use of gelatine and the compulsory cooling of open packed meat products are important factors, to control which considerable improvement is needed in the existing legislation. In the view of the working party, while the adoption of a code of practice is also suggested, this latter will cover many less vital features not at present suitable for inclusion in legislation. The report makes it clear that there is a great field for education in proper methods and, when these are established, it will not be difficult to incorporate more of the detailed items in the relevant legislation.

Milk and Dairies Regulations

The new legislation, operative in 1949 in relation to the dairy trade, meant a review of all the registered dairies and processing plants and in the near future will result in major changes in the distribution of milk. It takes

time for the real significance of requirements in new legislation to be properly evaluated but it is envisaged that the coming year will be one of special activity in relation to the dairy trade.

Registrations under Milk and Dairies Regulations 1950

	1949	1950
Persons registered as distributors of loose milk from dairies or milkshops in the city	240	194
Persons registered as distributors of bottled milk only	484	511
Persons registered as distributors from dairies outside the city	96	80
	<hr/> 820	<hr/> 785

During the year the number of distributors of loose milk removed from the register was 74, and the number added only 12. This is an indication of a general tendency in the trade which has been noticeable for some years, namely, for the small distributor of loose milk to disappear in the face of the requirements made by authorities in virtue of the powers given them by modern legislation. It is to be recognised that there has been steady and consistent progress in dairy practice for a good number of years and that premises once regarded as suitably constructed for use as a dairy are now considered to be out of accord with present-day requirements.

A systematic survey is being made of dairies throughout the city because of the new standards contained in the latest regulations. The application of the general requirements as to premises will need to be viewed in the light of the restriction on the handling of loose milk incorporated in the Milk (Special Designation) (Pasteurised and Sterilised Milk) Regulations, which became operative in two stages, i.e. 1st October 1950 and 1st October 1954. The impact of this legislation on the small distributor will be that many of them will handle bottled milk only, rather than incur expense in improving their dairies to bring them up to the standard.

The increase in the number of distributors of bottled milk is a reflection of the ample supply of milk available during the latter half of the year when rationing control was temporarily lifted. It has been found that the lifting of controls on retail sales has led to no increase in consumer demand.

There have been five new pasteurising plants licensed during the year and in three of these cases there have been extensive improvements and enlargement of existing dairies. In another case fresh premises were reconditioned for use as a dairy and one smaller unsatisfactory dairy closed. Extensive work was found to be necessary at a wholesale dairy before renewal of the processing licence could be considered; this included structural and plant improvement and general redecoration.

Milk (Special Designation) (Pasteurised and Sterilised Milk) Regulations 1949/50

These important regulations have now been in force fifteen months and the various new requirements on the milk trade are becoming more clearly defined. These requirements include technical improvements to pasteurising plants, such as the covering of the cooler or other exposed parts of the plant, and the provision of thermometers to record the temperature to which the milk is cooled. Plant engineers had no thermometer fitting suitable for fixing to the open-type cooler, and experimental work was carried out to evolve a fitting that would satisfy licensing authorities. Two firms in the

district now supply such fittings, and plant operators have given undertakings that they will secure the necessary improvements to their plants during the current year.

Another important requirement is that since the first of October milk sold as "pasteurised" can no longer be served from the open can but must be placed into the container, in which it is to be delivered to the consumer, at a licensed dairy. This has not led to much change in the city as loose milk is usually sold as "milk" and the special designation is not used in relation to it by the retailer. This brings forward the point that as long as the use of these designations is a voluntary matter it is difficult for inspectors to give adequate protection to the public against a mere verbal assertion by the dairyman that his milk is pasteurised although he is not selling it as such. It is only logical, if pasteurisation is necessary for public health reasons, that official control of all such milk should cover it until it reaches the public. This principle is recognised in the regulations in the requirements that, from the first of October 1954, pasteurised milk must be bottled or put into the containers in which it will be delivered to the consumer at the processing dairy only. It is more fully expressed, however, in the Minister of Food's power to specify areas in which the use of a special designation in relation to all milk sold for human consumption will be compulsory.

The recognition of sterilised milk as an official grade has involved the granting of 271 licences under this designation. The number of licences to sell milk as "pasteurised" has risen from 61 to 151.

There are 15 pasteurising plants and two sterilising plants in the city—an increase of five pasteurising plants since last year.

Transportation of Milk Samples taken under Milk (Special Designation) Regulations, 1949

The methods of taking samples and their transportation to the laboratory are laid down under these regulations, which made it necessary for the department to obtain additional equipment for the care of samples during transport. Suitable containers and carrying cases were purchased in order that the local authority's obligations under these regulations can be properly discharged.

The sampling outfits obtained comprise a sufficient number of insulated containers which can also be converted to artificially cooled containers where necessary.

It is as important for a local authority to observe the requirements of regulations of this type as it is for the trader whose industry the regulations control.

Milk (Special Designation) (Raw Milk) Regulations 1949/50

The number of licences issued to sell tuberculin tested milk rose from 51 to 78 during the year, while, as for last year, only three were issued in respect of accredited milk. The quantity of milk of these grades which is distributed raw is becoming less each year; several local firms are regularly processing their supplies of tuberculin tested milk and distributing it as tuberculin tested (pasteurised). Of 143 samples of raw tuberculin tested milk, 16 failed to pass the methylene blue test, which is an improvement on last year's figures of 122 and 27 respectively.

Samples Taken for Ministry of Health

At the request of the Ministry, samples of raw milk have continued to be taken at three institutions to which dairy farms are attached. A total of 83 samples were taken, comprising 50 for submission to the methylene blue test and 33 to be examined for tubercle bacilli and brucella abortus. Measured

against the standard for tuberculin tested milk, 12 of the first group of samples failed to pass the test; the Ministry, however, have intimated that as the milk is not for sale the farms are not subject to control under the Special Designation Regulations. No positive results have so far been received with regard to the presence of tubercle bacilli. One sample proved positive to brucella abortus, and the hospital authorities were advised to heat-treat the milk.

Biological Testing of Milk for Tubercle Bacilli

During the year 902 samples of milk were taken. Of these 586 (65%) were milks subject to pasteurisation before distribution; 276 (31%) were milks distributed raw and 40 (4%) were of other processed milks. Of the last group 21 were from plant of the holder type, and 19 from "high temperature short time" plants. It gives satisfaction to record that all these proved negative. 111 samples were of milk from tuberculin tested herds and gave negative results. Of the remaining 751 samples, seven proved positive involving five different farms, four being in Somerset, and one (an "accredited" farm) in the city area. Milk from two of these farms was being distributed raw and temporary diversion to a pasteurising plant was arranged through the co-operation of the Milk Marketing Board. The Board has indicated that their co-operation on this matter has led to administrative difficulties, and in one case the pasteuriser was being refused payment of his heat-treatment allowance. In future the relevant provisions of the Milk and Dairies Order will have to be implemented, which provides that the medical officer of health may serve a notice directing that such milk be heat-treated before being sold or used for human consumption, the notice being withdrawn when the medical officer of health is satisfied that the danger of infection is over. On each of four farms involved, an animal was slaughtered under the Tuberculosis Order 1938, and investigations are proceeding in regard to the other farm. Two farms reported in 1949 were under investigation at the beginning of the year; in one case one animal was slaughtered and in the other no "positive" animal was discovered. Three farms remained to be finally regarded as "cleared" at the end of the year.

The reduction in the number of samples found positive to tubercle bacilli is gratifying, and may have some relation to the energetic steps the government are taking to encourage the establishment of tubercle-free herds. The national plan has reached the stage when the first "eradication areas" have been defined, and it is hoped stage by stage to free the whole country of this costly disease eventually. This year the number of samples which proved to contain tubercle bacilli was a quarter of the total found last year. Reduction of sampling for tuberculosis where the milk is immediately processed is being introduced, and will enable the department to concentrate more on the milk supplied raw.

Ice Cream—Registration of Premises, Section 14, Food and Drugs Act 1938

The premises on the register at the end of 1950 were as follows:

<u>1949</u>					<u>1950</u>
	(a) For manufacture, storage and sale of ice cream				
51		(i) Hot Mix	.....	.....	50
9		(ii) Cold Mix	.....	.....	9
	(b) For storage and sale of ice cream				
308		(i) Loose	.....	.....	322
330		(ii) Prepacked	.....	.....	493
<u>698</u>					<u>874</u>

It will be noted that there is an increase of 176 in the number of premises registered for the sale of ice cream. Attention to these new registrations has taken up a considerable part of the inspectors' time but it may well be considered that saturation point has now been reached as to the number of retail selling points. A number of small makers have ceased manufacturing themselves, preferring to buy from the larger firms whose products have given satisfaction both to the consumer and the local authority.

Close supervision of manufacture and distribution of ice cream was maintained during the year and unsatisfactory samples were followed by advisory visits and further sampling. In only one case was it necessary to write a warning letter to a local manufacturer whose product was giving very variable results. In this instance, and in one other case, there was a drop in the hygienic quality of their products during the summer season. There was a suggestion that the trouble was due to the ingredients used, but, in both instances, after pressure from the department an alternative type of chemical sterilant, combined with complete daily dismantling of the plant, was adopted, it being clear that lack of thoroughness in cleansing and sterilising was the cause of the unsatisfactory results.

One local manufacturer has built an entirely new factory to replace small premises which were very congested, and two more firms are adapting other premises which will give them more floor space and lead to an improvement in the layout of their plants. Premises and plant generally in the city have been well maintained throughout the year.

It was expected that on the First of October 1950 the Minister of Health would have brought into operation the clause in the Ice Cream (Heat Treatment) Regulations 1947, which gives local authorities power to require the provision on the plant of such indicating and recording thermometers as they think fit to give effective control of the whole process of manufacture. Without such instruments on the plant the inspector is greatly handicapped in his work of supervision; however, the Minister has not yet seen fit to bring this requirement into operation.

The results of the year's sampling are shown in Tables A and B and both of these tables indicate an improvement in the general quality of the product since last year.

Dairies, Milkshops, etc.

1949	REGISTRATIONS.	1950
	Milk :—	
107	Dairies	86
96	Dairies outside City retailing within	80
617	Milkshops	619
	Ice-cream :—	
2	Premises for manufacture	2
58	Manufacture, sale and storage	57
638	Storage	815
	Licences :—	
	Tuberculin Tested—	
13	To bottle and sell	13
25	To sell only	56
12	Supplementary	9
	Accredited—	
1	To sell only	1
2	Supplementary	2
	Pasteurised—	
10	To produce and sell	15
61	To sell only	151
4	Supplementary	4
	Sterilised—	
—	To produce and sell	2
—	To sell only	269

Dairies, Milkshops, etc. (contd.).

1949	VISITS AND NOTICES.								1950
	<i>Visits—</i>								
840	Dairies	...	...	...	...	...	...	...	969
85	Milkshops	...	...	...	...	...	...	...	108
102	Cowsheds and Farms	...	...	...	...	...	...	...	—
194	Corporation Institutions	...	...	...	...	...	...	...	204
315	Schools	...	...	...	...	...	...	...	241
4,406	Others	...	...	...	...	...	...	...	3,099
1,572	Ice-cream premises	...	...	...	...	...	...	...	1,001
2,333	Pharmacy and Poisons	...	...	...	...	...	...	...	1,723
	<i>Notices—</i>								
29	Informal	...	...	...	...	...	...	...	26
35	Informal (complied with)	...	...	...	...	...	...	...	21
	<i>Remedial Action—</i>								
	<i>Premises—</i>								
4	New built	...	...	...	...	...	...	...	2
50	Altered or repaired	...	...	...	...	...	...	...	59
3	Roofs repaired	...	...	...	...	...	...	...	1
39	Cleansed—Dairies	...	...	...	...	...	...	...	14
31	Other defects	...	...	...	...	...	...	...	41
21	Plants installed—sterilising	...	...	...	...	...	...	...	13
—	New or additional water supply installed	...	...	...	...	...	...	...	—
158	Hot Water facilities	...	...	...	...	...	...	...	84
	<i>Drainage—</i>								
2	Tests made	...	...	...	...	...	...	...	2
—	New drains	...	...	...	...	...	...	...	—
11	Repairs	...	...	...	...	...	...	...	2
1	Chokages cleared	...	...	...	...	...	...	...	3
	<i>Water Closets—</i>								
2	Flushing appliances	...	...	...	...	...	...	...	4
3	New pans	...	...	...	...	...	...	...	8
9	Other repairs and cleansing	...	...	...	...	...	...	...	13
3	Other nuisances abated	...	...	...	...	...	...	...	—

Dairies, Milkshops, etc.

1949		SAMPLES.	1950	
Samples taken	Samples not complying		Samples taken	Samples not complying
222	—	Pasteurisation Test (Schools) ...	183	6
86	—	Tubercle Examination (including repeats)—		
316	—	City ...	139	1
492	—	Somerset ...	422	4
4	—	Gloucestershire ...	341	—
5	—	Other counties ...	—	—
117	27	Tuberculin Tested (certified) ...	22	—
87	28	Tuberculin Tested ...	121	16
2	—	Accredited ...	2	—
—	—	Pasteurised ...	412	14
—	—	Pasteurised T.T. ...	25	—
367	10	Sterilised ...	80	1
294	17	Heat-treated ...	6	—
1,210	—	Institution Tests ...	282	13
974	—	Under Food and Drugs Act (Milk) ...	1,104	32
253	107	Food and Drugs (other than Milk and Ice-cream) ...	1,573	41
—	—	Ice-cream (Hot Mix) ...	325	102
—	—	„ (Cold Mix) ...	16	5
348	6	Ice-cream chemical composition ...	160	—
2,434	—	Waters ...	329	20
994	—	Others ...	1,629	—
82	1	Fæces ...	761	—
112	43	Plant tests ...	80	1
—	—	Churn or bottle rinses ...	166	36
		Blood tests ...	—	—

Table A.

	1949				1950			
	" BRISTOL "		Methylene		" BRISTOL "		Methylene	
	Test		Blue		Test		Blue	
	PASSED	Failed	PASSED	Failed	PASSED	Failed	PASSED	Failed
	%	%	%	%	%	%	%	%
JANUARY	100.0	—	33.3	66.6	100.0	—	100.0	—
FEBRUARY	100.0	—	75.0	25.0	60.0	40.0	80.0	20.0
MARCH	83.4	16.6	50.0	50.0	100.0	—	57.1	42.9
APRIL	84.9	15.1	69.6	30.4	100.0	—	70.0	30.0
MAY	90.4	9.6	60.8	39.2	93.1	6.9	67.5	32.5
JUNE	81.3	18.7	58.3	41.7	86.2	13.8	58.1	41.9
JULY	80.0	20.0	36.7	63.3	79.7	20.3	53.7	46.3
AUGUST	85.7	14.3	53.8	46.2	92.8	7.2	77.6	22.4
SEPTEMBER	73.7	26.3	42.2	57.8	90.0	10.0	80.0	20.0
OCTOBER	100.0	—	50.0	50.0	100.0	—	84.6	15.4
NOVEMBER	100.0	—	100.0	—	100.0	—	56.3	43.7
DECEMBER	100.0	—	87.5	12.5	100.0	—	100.0	—
OVERALL % ...	86.2	13.8	57.0	43.0	90.2	9.8	68.4	31.6

Table B
Summary of Analysis of Ice-cream Samples, 1950

	Total No. of Samples Taken	FAT ANALYSIS				
		Under 2.5%	2.5-5%	5-8.5%	8.5-10%	Over 10%
JANUARY	12	Nil	1	3	3	5
FEBRUARY	4	Nil	Nil	1	2	1
MARCH	3	Nil	1	1	Nil	1
APRIL	5	Nil	Nil	Nil	3	2
MAY	27	Nil	Nil	7	9	11
JUNE	41	Nil	3	11	8	19
JULY	18	Nil	Nil	10	3	5
AUGUST	11	Nil	Nil	1	3	7
SEPTEMBER	12	Nil	2	3	5	2
OCTOBER	16	Nil	1	6	3	6
NOVEMBER	11	Nil	Nil	1	5	5
DECEMBER	Nil	Nil	Nil	Nil	Nil	Nil
Totals :	160	Nil	8	44	44	64
Percentage of total samples in each category		Nil%	5%	27.5%	27.5%	40%
Percentage of total samples in each category in 1949		16.2%	28.4%	27.3%	13.5%	4.5%

Ice Lollies

It was hoped that more effective control of the manufacture of these sweetmeats, which tend to rival ice cream in popularity with the younger generation, would have been secured by obtaining in the Corporation Bill presented to Parliament during the year, powers similar to those exercised with regard to ice cream, but the parliamentary committee remained unconvinced of the necessity of granting such powers.

Food Borne Diseases

This year only 15 outbreaks of food poisoning have been notified, involving 44 persons, but in none of these outbreaks was the agent responsible identified. (This compares with last year's revised figures of 24 outbreaks involving 289 persons.)

A further 39 single cases of food poisoning were investigated by the department, comprising 20 in which the agent was identified as a salmonella organism, the cause of the remaining 19 being unidentified. One salmonella infection was fatal; the patient being a man of 70 years, who consumed a fried duck egg for tea. In five other cases duck eggs were suspected of being the vehicle of infection, and in 19 cases a meat or fish product was suspected. In none of these 24 instances was it possible to get definite evidence that the suspected food was in fact infected.

<i>Outbreaks due to identified agents—</i>	Nil.
<i>Outbreaks due to undiscovered cause--</i>	Total = 15.
	(Cases involved = 44)
<i>Single Cases</i>	
Agent identified (Salmonella)	= 20 (1 case fatal)
Unknown cause	= 19
	—
Total	= 39
	—
Total cases for year	= 83
	—

Notification of cases of dysentery totalled 171 cases during the year, these comprised 48 single cases and 27 outbreaks involving 123 cases. The largest outbreaks occurred at Downend Babies' Homes, involving 39 cases; 12 cases were related to St. Paul's School, Bedminster, and 10 cases occurred at Ham Green Hospital.

Infectious Diseases

One case of paratyphoid A and one case of paratyphoid B have occurred during the year. In both cases onset was insidious and clinical symptoms not very definite. The first patient was a schoolmaster and the source of infection not proved. The difficulties associated with tracking down the sources of infection connected with isolated cases of this kind are too well known to require additional comment. The other patient was the only child of a household where shellfish was a frequent article of diet. There is no evidence that this was the source of infection, but investigations are proceeding with regard to the mussel layings involved. Four suspected cases of paratyphoid fever were notified and investigated, but the diagnosis was not confirmed.

Twenty-three cases of scarlet fever were referred to the department as having been in contact with food-handlers, and advisory visits were made.

Washing-up Efficiency Tests

Bacteriological tests of washed articles and of water and drying towels were introduced experimentally during 1949, and after a year's experience it was agreed, in consultation with Professor K. E. Cooper, that the technique could be accepted on a more permanent basis as forming a fairly reliable guide to the standard of cleanliness achieved in the operation. The details of the technique of taking samples have been carefully set out, and the interpretation of the results elucidated; these have to be considered in relation to the particular conditions at the kitchen under test. It is necessary, therefore, that full details of these conditions should be recorded at the time of the test and passed to the laboratory for information.

Most of the tests this year were done on school premises and are referred to under "school kitchens." In addition, eight tests were carried out at restaurants and canteens. When a check was made on four features of washing-up, viz. rinse water, wiping cloth, utensils (forks), crockery (plates), five were satisfactory; two were unsatisfactory in two of the four features tested; and one was unsatisfactory in three features.

Diseases of Animal Origin

Ringworm

During the year enquiries were made as to the significance of ringworm of animal origin in the city. It was not possible to arrive at any accurate estimation of the incidence, but it was found to amount to about 10% of the cases of ringworm treated at the Bristol General Hospital. It would appear from this that there are no grounds for supposing infection from animals to be a special problem in Bristol, as other towns are stated to have a very much higher incidence. It does, however, draw attention to one of the several risks incurred in the keeping of domestic pets. The problem of control would be a very difficult one, and it is not suggested that there are grounds for attempting to curtail the pleasure of the public in possessing such pets, except that the presence of these animals in food shops or food preparing establishments must be regarded as undesirable on public health grounds.

Weils' Disease

One fatal case of this disease occurred during the year in the Shirehampton district. The patient was a postal worker whose duties took him on board ships at Avonmouth Docks from time to time. Exhaustive enquiries failed to establish any definite contact of the patient with rodents.

A dog kept by the patient gave negative results on blood and urine examination and it remains a possibility that the infection was contacted on a visit to a ship.

School Milk

During the year, 183 samples of milk supplied to schools were taken. These were all "pasteurised" supplies and the samples were taken strictly in accordance with the requirements of the appropriate special designation regulations. Of these samples, five failed to pass the methylene blue test and one failed the phosphatase test, while sixty were not submitted to the methylene blue test owing to the atmospheric shade temperature being over 65°F. It is interesting to note that the shade temperatures recorded on the days when the methylene blue failures occurred were 64°F and 65°F. The phosphatase failure is difficult to account for, as two other samples taken at the same time and place were satisfactory; the milk concerned was processed in a large H.T.S.T. plant and the dairy records gave no indication of unsatisfactory processing.

School Kitchens

As in previous years, there has been close co-operation between the school meals service and the health department in relation to kitchen hygiene. Two special features have marked this year: first, education of the kitchen and canteen staffs in food hygiene by means of fifteen lectures with films given by sanitary inspectors; secondly, a special series of washing-up efficiency tests carried out to ascertain what improvements, if any, would be secured by the use of an alternative detergent and sterilant of the hypochlorite class instead of the common soda and liquid cleanser already in use. The series consisted of eight carefully controlled tests carried out at a modern kitchen with sterilising equipment available. The results indicated there was no significant improvement in the cleanliness of the washed articles and equipment assessed bacteriologically.

The washing-up efficiency tests were commenced as an experimental matter during 1949 and, as mentioned elsewhere in this report, the technique has now been accepted as a suitable basis for measurement of the standard of cleanliness of the washed articles. During 1950, 38 tests were carried out on school premises; 31 were satisfactory, five were unsatisfactory in two of the four features tested, two were unsatisfactory in all features. On the whole the results were gratifying. Advisory visits were made after unsatisfactory results and further tests taken.

It is pleasing to record that twelve out of the fourteen temporary kitchens were closed during the year and the remaining two were converted from solid fuel cooking to gas-fired units. One other unsatisfactory kitchen was closed and structural improvements were carried out at, and better equipment provided in, eleven establishments. During the year a programme of redecoration was carried through but some schemes of improvement are in abeyance pending official sanction of expenditure involved.

Sampling of Food and Drugs

During the year 2,837 samples of food and drugs were collected and submitted to the public analyst for analysis. The proportion of samples collected per thousand of the estimated population was 6.4. The total number and nature of the samples collected, as well as the total number found adulterated is as set out below.

A detailed report is also attached giving the nature of adulteration and the action taken in respect of the 73 samples condemned by the public analyst, but this can be summarised more briefly as follows:

- | | | |
|----------------------------|---|--|
| 2 Canned Vegetables | - | Repeat samples genuine. |
| 1 Curry Powder | - | Repeat samples genuine. |
| 2 Fish Paste | - | 1 Sample taken informally followed by 1 sample taken formally which proved unsatisfactory and referred to Ministry of Food for necessary action. |
| 2 Gelatine | - | Repeat samples genuine. |
| 2 Herbs (Sage) | - | 1 sample taken informally followed by 1 sample taken formally in respect of which caution was issued by town clerk. |
| 1 Jam | - | Repeat sample genuine. |
| 2 Maple Syrup | - | Cases not yet heard. |

32 Milks	-	-	-	23 Whole consignment when bulked proved genuine. 4 Repeat samples genuine. 2 Referred to appropriate county authorities for necessary action. 1 Cautioned by town clerk. 2 Formal repeat samples to be obtained.
2 Meat Paste	-	-	-	1 sample taken informally followed by 1 sample taken formally which proved unsatisfactory and referred to Ministry of Food for necessary action.
1 Salad Cream	-	-	-	Repeat sample unobtainable.
13 Sausages	-	-	-	8 Repeat samples proved genuine. 1 taken informally and followed by formal repeat sample. 4 samples taken informally and on proving unsatisfactory referred to Ministry of Food for necessary action.
1 Sausage Meat	-	-	-	Repeat sample genuine.
1 Semolina	-	-	-	Repeat sample genuine.
3 Sherbets	-	-	-	Retailer cautioned re misdescription of commodity.
1 Suet	-	-	-	Formal repeat sample to be obtained.
2 Whisky	-	-	-	Cases not yet heard.
1 Hydrogen Peroxide	-	-	-	Formal repeat sample to be obtained.
2 Morison's Paste	-	-	-	1 sample taken informally followed by 1 sample taken formally in respect of which case has not yet been heard.
2 Sulphur Tablets	-	-	-	Repeat samples genuine.

During the year Legal Proceedings were taken in respect of two whisky samples out of the three outstanding from 1949 where action was not complete at time of compiling report for that year, the other whisky case was withdrawn. Caution was issued by Town Clerk in respect of one unsatisfactory milk still outstanding.

3 Whiskies	-	-	-	2 granted absolute discharge on payment of £5 costs. 1 case withdrawn, each party to pay their own costs.
1 Milk	-	-	-	Cautioned by town clerk.

Nature of Sampling	1949	1950
Schools Milks (pasteurised)	222	183
Milk for Tubercle Examination:—		
City	86	139
Somerset	316	422
Gloucestershire	492	341
Other counties	4	—
Tuberculin-tested (farm bottled)	5	22
Tuberculin-tested	117	121
Pasteurised	2	412
Pasteurised T.T.	—	25
Sterilised	367	80
Heat-treated		6
Accredited	87	2
Institutions:—		
Accredited	27	—
Tuberculin-tested	27	50
Pasteurised	240	232
Food and Drugs (Milks)	1 210	1,104
Food and Drugs (other than Milks and Ice Cream)	974	1,573
Ice Cream:—		
Hot Mix		325
Cold Mix	253	16
Chemical Composition	—	160
Waters	348	329
Miscellaneous and others	2,434	1,629
Plant Tests	82	80
Churn and Bottle Rinses	112	166
Faeces	994	761

VISITS.

Total Visits for	1949	1950
Inspection of Foodstuffs only	6,527	5,517
Total visits for sampling supervision of premises, infectious disease enquiries, pharmacy and poisons, etc.	9,847	8,770

Pharmacy and Poisons Act, 1933

During the year there were 61 applications received for entry in the local authority's list of persons entitled to sell Part II Poisons and 529 applications for retention of names in the list were received, making a total of 590 entries at the end of the year. Thirty-five listed sellers were reported to the committee and removed from the register, as they had failed to apply for retention, but nine of them later made fresh applications. Seven shopkeepers were cautioned by the town clerk for selling Part II Poisons without being on the local authority's list and of these two applied to be placed on the list, whilst five returned their stocks to the wholesalers having decided not to sell this class of goods.

Four samples of products were submitted for analysis with reference to this Act and in each case complied with the rules made thereunder.

Butter and Margarine Premises

The following table shows the entries at the end of the year in the registers in connection with the classes of premises dealt with under Section 34 of the Food and Drugs Act, 1938.

Butter factories	14
Premises of wholesale dealers in milk blended butter	4
Premises of wholesale dealers in margarine	50

During 1950, one new butter factory and two premises of wholesale dealers in margarine were registered, and twelve of the latter class were removed from the register. One butter factory was found to contravene the provisions of the Act in that it communicated directly with a margarine store and this was duly rectified. Considerable structural alteration was necessary in connection with the newly-registered butter factory in order to secure compliance with the Act.

Noxious Weeds

The use of the Corporation's powers in this matter delegated to them by Statutory Order in 1948 is a cumbersome procedure. Formal notice of inspection of land has to be given to the "occupier" and copies of notices to destroy weeds have to be sent to both tenant and landlord. After expiry of the time given in such notices, the Corporation have power to carry out the work of destroying the weeds and to recover the cost from the person in default. No proceedings may be taken, however, without the consent of the Minister of Agriculture and Fisheries.

In two cases listed below, the land complained of was jointly owned by a number of persons and conditions were not regarded as serious enough to justify further action.

Total number of complaints	21
Number satisfactorily dealt with and weeds cleared	18
Number not involving scheduled noxious weeds	2
Number where no action taken by occupiers or local authority	4

Rag Flock

Fourteen samples of rag flock were examined during the year, and of these three were found to contain chlorine in excess of the prescribed limit. In one case the analyst reported fifty parts of chlorine per 100,000, this being twenty parts in excess of the prescribed limit. This flock was being used in the repair of furniture; there was no stock of flock on the premises and the user intimated when cautioned that he would not be doing any more upholstery work. In the other two unsatisfactory samples, results were 50 and 55 parts per 100,000. These were obtained from flock produced at a nearby mill under British Standard Specification, which includes a strict programme of sampling at the mill. The results are, therefore, surprisingly high. Further work is being done on these samples by the public analyst, and it is felt that confirmatory evidence should be obtained that the high chlorine content does, in fact, indicate a dirty flock before further action is taken. The chlorine test as laid down in the regulations is recognised as of very limited use, and it is to be regretted that new legislation governing the use of rag flock in accordance with the recommendations of the departmental committee report, issued in 1946, has not yet been provided.

Fertilisers and Feeding Stuffs Act, 1926

Increased attention has been given to sampling under the above Act, the total samples taken during the year being 57. These are classified in the table below :

Feeding Stuffs	
Formal routine samples at produceers' premises	25
Formal samples at producers by request of outside authorities	3
Informal samples at wholesale or retail premises	4
Formal samples at retail premises following unsatisfactory informal samples	Nil
Fertilisers	
Formal routine samples at produceers' premises	2
Formal samples at producers by request of outside authorities	2
Informal samples at retail premises	18
Formal samples at retail premises following unsatisfactory informal samples	3

There are 18 manufacturers of feeding stuffs and five manufacturers of fertilisers in the city; eight of the provender mills concerned are situated at Avonmouth Docks.

One formal sample taken during the year was found to be unsatisfactory, viz. a locally-made pig meal. The producer was cautioned, and a repeat sample taken later was found to be in order.

Four retailers were found to be selling from bulk in their shops without displaying the particulars required in the statutory statement, and warning letters were sent in each case. One authority referred an alleged unsatisfactory poultry food to us for investigation, the food containing a high percentage of sand, but enquiries at the local suppliers revealed that the food was distributed by them as rabbit food and was, therefore, not within the scope of the Act.

The carrying out of formal sampling on large quantities of bulk or bagged materials in accordance with the regulations involves a considerable amount of work. The Ministry of Agriculture and Fisheries considered that if it could be proved by means of a series of experimental samples that the day-to-day variation in the production of any one commodity from a given stock of raw materials would be negligible, steps might be taken to amend the methods prescribed in the regulations so as to reduce the work involved at present in dealing with large quantities.

Some experimental sampling was carried out by the port health inspectors to assist the ministry in their investigations; this involved sampling approximately 10% from the continuous production of the commodity in two different mills over five successive days. The analytical results were very satisfactory and did go to show that the variations were negligible. Similar experimental sampling was carried out in different parts of the country and it is hoped these investigations will lead to a simplification of the sampling methods prescribed in the regulations.

Agricultural Produce (Grading and Marking) Act, 1928

The Ministry of Agriculture are working on a new scheme for grading various foodstuffs in line with pre-war grades marketed under the above Act.

On the 2nd February, 1950, the Ministry of Agriculture and Fisheries indicated that the provisions of Sections 3 and 4 of the Agricultural Produce (Grading and Marking) Act, 1928, which had been suspended since 1944, would again be fully operative as from 30th April, 1950.

Cleaner Food

Elsewhere in this report the number of food poisoning cases and outbreaks are dealt with in detail and show that there was a considerable reduction in cases this year compared with the numbers that occurred in 1949. While the department does not feel in any way complacent about these results, it is believed that the appreciable decrease is due in some measure to the "clean food" campaign that is being pursued. In this connection more than 70 lectures and demonstrations were given during the year by members of the chief sanitary inspector's staff to food handlers such as butchers, bakers, school canteen staffs, licensed victuallers, grocers, and also to discussion groups, townswomen's guilds, and members of the chamber of commerce.

Much of this work was done in the evenings with the assistance of the Central Office of Information in showing films on cases of food poisoning, whilst other illustrations gave hygienic methods of food preparation. The aid afforded us by the films officer and staff of the C.O.I. was most helpful in arranging the various types of lectures to the different organisations involved, and this assistance is greatly appreciated by the health department. While the food traders were "priority" in this matter, it should be recorded that many other bodies with wide influence in public matters and employing fields were also given similar talks and demonstrations. At the end of the year, by the kind permission of the management, a special exhibition on "The Safeguards for Food" was arranged at the Odeon Cinema, Bridewell, and at the same time the film entitled "Another Case of Poisoning" was shown. During the week of the exhibition it was estimated that some 28,000 people saw both film and exhibition. The material for the exhibition was obtained by the M.O.H. through the Ministry of Health and provided an admirable and succinct review of food poisoning in all its aspects, with stress laid on the simple precautions that, if observed, would prevent outbreaks.

An immense amount of work has been carried out at food premises generally during the year, and while a great deal still remains to be done, there is no doubt that the emphasis on clean food propaganda must, in the near future, be mainly directed towards improving the personal factor in food hygiene. The legislation controlling food handling, set out in the Food and Drugs Act, 1938, was considerably strengthened during the year when the city council adopted the "Model Byelaws," Series 1, for the Handling, Wrapping and Delivering of Food and Sale of Food in the Open Air, which had been published by the Ministry at the end of 1949. The byelaws became operative in April, 1950, and have already proved their worth in raising the standards of food handling hygiene in the city.

There are some aspects of these byelaws which are difficult to interpret in detail but these points are now receiving the attention of the Ministry of Food with a view to assisting local authorities and so make application of the byelaws uniform throughout the country.

The campaign of educating both food traders and the public is proceeding with enthusiasm. It is hoped that, whether or not a further reduction in the incidence of food poisoning is achieved in the coming year, at least those cases which do arise will not be due to poor food handling methods.

CITY WATER SUPPLY.

Particulars required by Ministry of Health Circular

<p>1. Whether the water supply of the area and its several parts has been satisfactory.</p> <p>(a) in quality.</p> <p>(b) in quantity.</p>	<p>YES.</p>
<p>2. Where there is a piped supply, whether bacteriological examinations were made of the raw water and, where treatment is installed, of the water going into supply; if so, how many and the results obtained; the results of any chemical analysis.</p>	<p>Raw waters examined bacteriologically before treatment by Bristol Water Works Company.</p> <p>Raw water at Barrow before filtration—weekly.</p> <p>Raw water at Chelvey before chlorination—twice weekly—when pumping.</p> <p>Raw water at Litton before chlorination—weekly.</p> <p>After treatment found satisfactory.</p>
<p>3. Where the waters are liable to have plumbo-solvent action, the facts as to contamination by lead, including precautions taken and number and results of analysis.</p>	<p>NOT LIABLE.</p> <p>Water is not liable to lead contamination and this is confirmed by weekly analysis of all city supplies.</p>
<p>4. Action in respect of any form of contamination.</p>	<p>On finding any trace of faecal pollution the matter is taken up with the appropriate authority immediately when further samples are taken until satisfactory results are obtained.</p> <p>Contamination after treatment has been negligible.</p>
<p>5. Particulars of the proportion of dwelling houses and the proportion supplied from public water mains.</p> <p>(a) direct to houses.</p> <p>(b) by means of standpipes.</p>	<p>(a) The whole of the population in the Bristol area is supplied by public water mains direct to houses with the exception of a few isolated premises in the rural suburbs when the supply is free from private wells and subject to a form of chlorination. These are gradually being reduced as mains supply is laid on.</p> <p>(b) Negligible.</p>

(V) ATMOSPHERIC POLLUTION, OFFENSIVE TRADES AND NUISANCES.

Atmospheric Pollution

The important work of air-pollution control again received close attention by the Bristol health committee and its officers. It is pleasing to record that there is a gradual recognition of the need for improvement in atmospheric conditions. During the year, 29 complaints were received from members of the public who were suffering nuisance from smoke, grit and fumes from various industrial concerns. This involved a total of 204 visits by the sanitary inspectors who thus achieved considerable improvement in conditions.

Whilst no action was taken which could be construed as interfering with the proper working of industry, every effort has been made, in collaboration with the Ministry of Fuel and Power and the firms concerned, to abate and better still to prevent the creation of nuisances arising from the imperfect combustion of fuel.

The fuel efficiency campaign, instituted by the Ministry of Fuel and Power, focuses attention on the fact that smoke abatement and fuel efficiency are synonymous terms; in other words smoke abatement is "good business" and deserves the attention of every fuel user. This principle applies in the same way to the domestic use of fuel and there is no doubt that the new approved domestic fuel appliances which are being installed in such large numbers in the city and throughout the country will have a great and beneficial effect with regard to this problem as a whole.

The medical officer of health was asked for his observations on the public health aspects of a proposed phosphorus factory at Portishead. The chief sanitary inspector and the deputy public analyst visited Widnes and Oldbury to ascertain at first hand the working conditions and possible atmospheric pollution emitted from this class of industrial concern. The medical officer of health subsequently reported to the health and planning committees on this matter and it is to be noted that undertakings to safeguard against the creating of nuisance was given by the firm concerned before a decision was reached by the city council planning committee.

The chairman of the sanitary sub-committee, Alderman T. Jefferis, accompanied by the chief sanitary inspector, attended the conference of the National Smoke Abatement Society held at Margate during September 1950. This conference was interesting and the material presented in the papers and subsequent discussions most encouraging. In addition to the presidential address, there were papers on smoke and health; smoke as applied to new housing; and the problem of railway smoke.

The chief sanitary inspector presented a report on an enquiry by the society's publicity committee on the "Smokeless Fuels Situation."

One of the best methods of reducing smoke from industrial plant is by the training of boiler firemen and, in Bristol, classes on combustion and boiler plant operation are run in conjunction with the Ministry of Fuel and Power. These classes are very poorly attended having regard to the total number of boiler firemen in the city and this aspect of the training problem is to receive further attention during the coming year.

The Bristol and District Regional Smoke Abatement Council, which was formed in 1938, includes representatives of nineteen local authorities within a 25-mile radius of the Bristol council house, and whilst the problems dealt with by this advisory committee are mainly of a local character, it is important to remember that a link is thus formed with more than 400 other interested local authorities through the National Smoke Abatement Society.

The annual meeting of the Bristol and District Regional Smoke Abatement Council was presided over by the chairman, Councillor A. J. M. Wright, who has taken a special interest in this subject in his capacity as chairman of the Bristol health committee.

In view of the increasing concern about all forms of atmospheric pollution, particularly from chemical works and similar industries, the address given by W. A. Damon, Esq., C.B.E., chief alkali works inspector of the Ministry of Health, was considered to be of special interest and the inter-change of views which took place between local authority representatives and government department officials proved stimulating and helpful.

Offensive Trades

The premises used for offensive trade processes in this city were visited from time to time to ensure that conditions likely to give rise to public health nuisance were prevented, but a petition was received regarding offensive odours emanating from premises used for the scraping and drying of calves' stomachs.

The chief sanitary inspector reported on this matter to the sanitary sub-committee who subsequently visited the premises and requested the city planning officer's co-operation with the management in finding more suitable premises for dealing with this material which is collected from slaughter houses throughout the south-western area.

A number of alternative sites have been considered, but meanwhile the nuisance has been considerably reduced by measures recommended and readily undertaken by the company concerned.

Noise Nuisance

A number of petitions were received from residents of property adjoining or near industrial premises, complaining of excessive noise created during the night hours.

In some cases, it was established that the noise complained of was unnecessary and a degree of satisfaction was obtained through an approach to the various managements, but in some cases, particularly where night work was carried on, little improvement was effected.

Special consideration was given by the health committee to the constant complaints received regarding noise caused by firms carrying on baking operations at night and, during the discussions, a point of view was advanced that legislation should be introduced to prohibit night baking. It was decided to call the attention of the Association of Municipal Corporations to this matter and to ask that support be given to any legislation which might be introduced to prohibit night baking operations.

Rubbish Deposits on Void Sites

Many complaints were received by the health department regarding the condition of void sites throughout the city. There is an old adage which runs "If each before his own door swept, the city would be clean." This may be true in a general way but if the sweepings and any other unwanted material—the result of spring cleaning, etc.—is thrown on the nearest void site, then further problems of unsightliness and rat harbourage are created. One difficulty here is that in many cases the material cannot be classed as noxious and often it cannot be said that these rubbish deposits are due to the act or default of site owners.

Additional powers to deal with deposits of rubbish which are unsightly, or otherwise detrimental to the amenities of the neighbourhood, have been granted in the Bristol Corporation Act, 1950.

Public Sanitary Accommodation

A number of complaints have been received during recent years regarding the unsatisfactory accommodation provided as public conveniences for members of the public attending fairs and exhibitions on open land within the city area.

Following the receipt of a petition from a large number of residents, the health committee asked the planning and reconstruction committee to consider the allocation of sites for public functions of this kind, such sites to be equipped permanently with suitable and sufficient sanitary facilities.

A resolution was received from the Bristol Federation of Townswomen's Guilds requesting that free washing facilities be provided in all public conveniences and this matter, together with the question of free washing facilities for out-door food distributors, was discussed with the transport and cleansing committee. The latter committee made it clear that there is a planned programme to provide adequate and properly equipped public conveniences in all areas throughout the city and it is pleasing to record that extensive improvements have been carried out during the year to many existing conveniences.

Public Drinking Fountains

In view of the prevalence of polio myelitis, the question of communal drinking cups attached to public fountains was raised by the health committee. The chief sanitary inspector reported that he had caused a communication to be sent to the city engineer stating that it was considered the captive cups attached to drinking fountains were unhygienic, that all future drinking fountains should be of the jet type, and that existing facilities should be suitably converted as soon as possible.

Main Drainage Extensions

The development of new housing sites on the outskirts of the city has transformed the more rural parts of Bristol into small neighbourhood units. The amenities provided to the new housing estates such as main drainage, gas, electricity and street lighting, in this way becomes available to existing dwellings in these areas.

The advent of main drainage to previously unsewered localities has been welcomed by the chief sanitary inspector's department since it affords an opportunity of abolishing earth-closets, cesspools, septic tanks and the like.

Unfortunately, conversion of all properties to main drainage is no easy matter, as the Public Health Act 1936 gives power only to enforce conversion in the case of closets other than water-closets. At the time of the original construction of a building, a water carriage system to cesspool or septic tank must be accepted as a satisfactory alternative means of disposal in the absence of reasonably available sewers.

There is no set method for persuading owners to consider conversions of this type. The department has, therefore, carried out several test cases with the object of laying before owners proposals drawn up by the city engineer's department. The results of these test cases have proved that there are numerous difficulties in this matter, but the chief sanitary inspector and the city engineer are continuing discussions with a view to evolving a sufficiently attractive proposition to secure the co-operation of all concerned.

(VI) RAT DESTRUCTION : DISINFECTION AND DISINFESTATION.

Rodent Control

The law relating to measures to be taken in respect of rat and mice destruction was brought up to date this year by placing on the statute book of "The Prevention of Damage by Pests Act 1949," which came into operation

on the 31st March 1950 and repealed "The Rats and Mice (Destruction) Act 1919."

The new Act emphasised that it would be the duty of every local authority to take all the necessary steps to secure, as far as is practicable, that their district is kept free from rats and mice. Previously, the responsibility for keeping premises free from these pests was, in the first place, laid upon the owners or occupiers of the premises concerned and, although the new Act lays stress on the local authority's responsibilities, it does, at the same time, provide them with the necessary powers to ensure that the obligations of occupiers of premises and land are observed. Occupiers must notify the local authority if their premises are infested with rodents.

It is encouraging to report that occupiers of infested premises have been extremely helpful in co-operating with this department in the clearance of vermin and that, in no instance, has statutory action been necessary.

Close supervision was again exercised on special premises such as clinics, nursery schools, corporation tips, river banks, and the pig-food processing plant at Eastville. Civic restaurants and school kitchens have also received suitable supervision and advice, and assistance has been given to the Ham Green hospital and Charterhouse sanatorium in connection with pest problems. In addition, the necessary measures of pest extermination have been carried out on derelict sites, premises damaged by enemy action, private tips throughout the city (by arrangement with the owners), and the opportunity was taken, when the Eastville destructor works were closed for reconstruction, to make a thorough inspection there and clear the light infestation that existed.

There were sixty-six instances in which rodent infestation was found to be related to defective drains and the necessary repairs were effected.

Rats taken from all parts of the city were submitted to the Department of Preventive Medicine for examination for plague and disease, and all proved negative.

Maintenance treatment of the city sewers, as laid down by the Ministry of Agriculture and Fisheries, has been carried out and the number of poison baits taken indicate that the action was effective. It is estimated according to the formula adopted by the Ministry that some 37,000 rats have been destroyed by this type of treatment this year. More effective block control measures in special premises were obtained by arrangement with the South Western Electricity Board, the South Western Gas Board, the South Western Hospital Board, and the Cossham and Frenchay Hospital Group. It was thought advisable to accept control of the premises of the power station at Portishead, the property of the South Western Electricity Board, as it was considered that the proximity of these premises to the Portishead docks which, in turn, are closely related to the docks at Avonmouth and the southern outskirts of the city, would complete the link-up against the threat of waterborne rats to the city area. Intensified work has been performed at the Avonmouth and Portishead docks this year and a reflection of this action is indicated in the number of premises which have been clear of vermin for considerable periods.

Rat Repression

No of Complaints of Rats or Mice		Dealt with by Corporation	Dealt with by Occupier	No action required	Out-standing
Out-standing. 1949	Re-ceived. 1950				
269	2,288	1,978	79	278	222

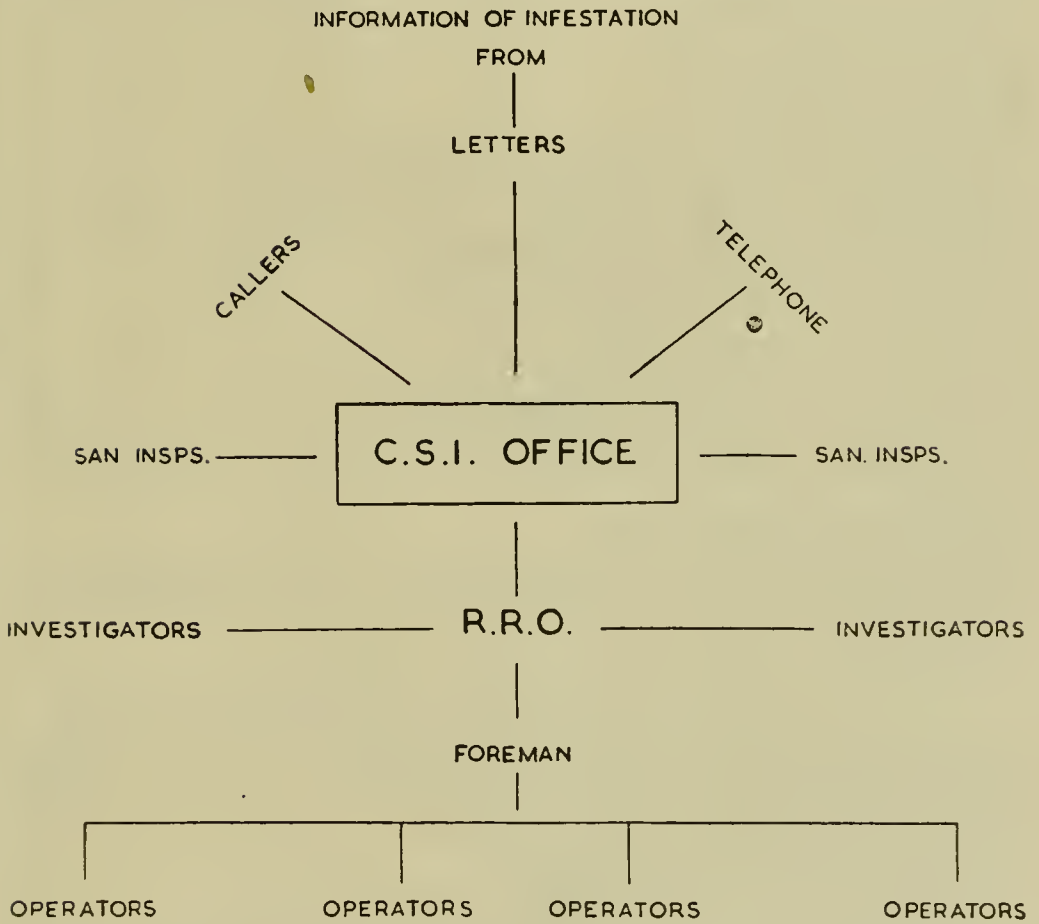
Type of Infestation complained of		Bodies Recovered from Premises	
Rats	Mice	Rats	Mice
1,643	645	831	506

Dock Area :—

Bodies Recovered :—	Rattus rattus	Rattus norvegicus	Mice
	1,610	472	92

It is claimed that the loss of foodstuffs and damage to materials through rodent activity in the ports of the Bristol authority have been reduced to a minimum. While rat infestation is slowly coming under control and may be said to be satisfactory in all the circumstances associated with this problem, the presence of mice is again widespread and will require increased attention and measures of extermination.

OUTLINE OF ORGANISATION
FOR
RODENT REPRESSION



Rat Repression—Summary of work done during Year 1950

1949					1950			
Business Houses	Houses	Other	Total		Business Houses	Houses	Other	Total
77	56	40	173	Complaints incompletely dealt with b/forwd. ...	132	94	43	269
678	1,255	210	2,143	Complaints received ...	641	1,430	217	2,288
755	1,311	250	2,316		773	1,524	260	2,557
				Remedial action—				
				Infestation cleared—				
567	932	201	1,700	By Corporation ...	625	1,135	218	1,978
28	76	1	105	By occupiers ...	5	74	—	79
28	209	5	242	No action required ...	35	233	10	278
132	94	43	269	Incompletion at end of year carried forward ...	108	82	32	222
755	1,311	250	2,316		773	1,524	260	2,557
Avon-mouth	Bristol	Portis-head	Total		Avon-mouth	Bristol	Portis-head	Total
				Rats recovered—				
				Docks, quays, wharves, etc.—				
1,104	10	24	1,138	Brown ...	1,384	170	56	1,610
886	12	51	949	Black ...	385	33	54	472
				Species not recorded ...				
996	11	49	1,056	Examined for plague ...	687	5	37	729
105	10	11	126	Mice ...	92	6	1	99
				City—				
			1,443	Brown ...				445
			1,065	Black ...				386
				Species not recorded ...				
			60	Examined for plague ...				42
			928	Mice ...				506

Disinfection and Disinfestation

The disinfection service, centred at Feeder Road, again played its full part in various aspects of environmental health matters dealt with by the department.

The total number of jobs carried out by the disinfecting station staff was 6,571 and the following indicates generally the type of work performed:

Total number of articles disinfected or disinfested	.....	.....	100,486
Total number of premises disinfected or disinfested	.....	.....	5,022
Total number of articles collected and destroyed	.....	.....	3,677
Total number of baths (verminous persons)	.....	.....	155
Total number of drain tests carried out	.....	.....	128

The steam disinfecting plant which has been in operation for many years has again been used to capacity; indeed, with some of the materials arriving at peak periods, it was on occasion necessary for the staff to work a limited amount of overtime. This was undertaken readily and it is not out of place at this point to refer, with credit, to the maintenance work on plant and equipment carried out by Mr. F. Boyce, the disinfecting station foreman.

It is of interest to record that, apart from routine disinfection following cases of infectious disease, many disinfections were carried out for various local authority departments, youth organisations and industrial concerns. Two examples may be quoted:

- (a) When a local authority hostel was closed, nearly 1,000 articles were disinfected and the premises sprayed, and

(b) An industrial concern sent some 15,000 poultry meal bags for steam treatment to prevent spread of fowl pest.

In addition, a total number of 221 disinfection treatments were carried out and charged to various local authorities and organisations outside the city boundary.

A further service operated at the disinfecting station was the facilities offered for the treatment of scabies, and in 1950 126 men were treated and cleared of this condition.

During the year new spraying equipment was provided and it is worthy of note that the finer spray of disinfectant gave greater efficiency of treatment and created a considerable saving in the use of liquid disinfectant.

Disinfections, Drain Tests, etc.

1949		1950
4,043	Premises disinfected	4,546
115,263	Articles disinfected	94,836
8,989	Articles disinfested	5,650
1,300	Articles destroyed	3,677
493	Vermin repression—by spraying	476
—	by fumigation	—
142	Vermin baths—Men	149
2	Women	6
369	Disinfections for Hospitals and Nursing Homes	507
282	Public Library books collected and disinfected	442
130	Private Library books collected and disinfected	104
37,527	Foodstuffs, etc., destroyed—Canned food ...	50,078
7,139 lbs.	Other foodstuffs ...	27,770lbs.
448	Premises visited	662
175	Drain tests	128
616	Other work	759

FACTORIES ACTS, 1937 and 1948.

1.—Inspection of Factories.

Premises (1)	Number on Register (3)	Number of		
		Inspec- tions (4)	Written notices (5)	Occupiers prose- cuted (6)
(i) Factories in which Sections 1, 2, 3, 4 and 6 are to be enforced by Local Authorities	81	420	26	—
(ii) Factories not included in (i) in which Section 7 is enforced by the Local Authority	486	1,025	58	—
(iii) Other Premises in which Section 7 is enforced by the Local Authority (excluding out-workers' premises)	48	9	—	—
TOTAL ...	615	1,454	84	—

FACTORIES ACTS, 1937 and 1948.

2.—Cases in which defects were found.

Particulars (1)	No. of cases in which defects were found				No. of cases in which prosecutions were instituted (7)
	Found (3)	Remedied (4)	To H.M. Inspector (5)	By H.M. Inspector (6)	
Want of cleanliness (S.1)	14	13	—	13	—
Overcrowding (S.2)	—	—	—	—	—
Unreasonable temperature (S.3) ...	3	1	—	1	—
Inadequate ventilation (S.4)	1	—	—	—	—
Ineffective drainage of floors (S.6)	—	—	—	—	—
Sanitary Conveniences (S.7)—					
(a) Insufficient	4	3	—	3	—
(b) Unsuitable or defective ...	172	125	—	61	—
(c) Not separate for sexes ...	6	3	—	7	—
Other offences against the Act (not including offences relating to Outwork)	13	14	5	5	—
 TOTAL ...	 213	 159	 5	 90	 —

Outworkers.—Lists of Outworkers received during 1950.

Description of Homework	No. of outworkers	
	February	August
Making of wearing apparel	57	44

DEPARTMENT OF PUBLIC HEALTH — MEDICAL OFFICER OF HEALTH

ENVIRONMENTAL HEALTH SERVICES

Chief Sanitary Inspector - - - - - 48 Queen Square, Bristol 1

123

HOUSING	SANITATION—continued	MILK AND DAIRIES	FOOD AND DRUGS	PORT HEALTH
<p>Housing Acts. House Inspection and Report.</p> <p>Clearance Orders. Local Public Enquiries.</p> <p>Demolition Orders.</p> <p>Closing Orders. Parts of Buildings, Underground Rooms.</p> <p>House Repairs Specification of Works, Supervision of Work Carried Out, Repair Contracts, Local Land Charges Register.</p> <p>Abatement of Overcrowding. Common Lodging Houses, Registration and Routine Inspection.</p> <p>Houses Let in Lodgings. Registration and Inspection. Statutory Notices.</p> <p>Legal Proceedings.</p>	<p>Camping Sites (Tents, Vans and Sheds), Infectious Disease—Enquiries, Disinfection and Disinfestation, Drainage, Inspection of Entertainment Houses (Sanitation and Ventilation), Nursing Homes (Sanitation), Mortuaries (Inspection and Re-interment).</p> <p>Factories, Workplaces & Shops, Factories Act, Registration, Outworkers, Sanitation and Hygiene.</p> <p>Shops Act, Sanitary Accommodation, Heating, Lighting & Ventilation</p> <p>Rag Flock Acts Sampling to Check Cleanliness of Flock.</p> <p>Bristol Corporation Acts. Noise Nuisance, etc. Registration of Hairdressers, Tattooists, Food Handlers and their premises, Provision of Temporary Sanitary Accommodation, Prohibition of Sale of Vermineous Articles, Exclusion of T.B. Persons from Food Handling.</p> <p>National Assistance Act 1948. Sec. 37. Registration of Homes for Disabled/Aged Persons. (General Sanitation.) Sec. 47. Removal of Aged and Infirm Persons.</p> <p>General Legal Provisions. Statutory Notices. Legal Proceedings.</p>	<p>Food and Drugs Act.</p> <p>Milk and Dairies Regulations, Supervision of Distribution and Purity of Milk, Inspection of Water Supplies. Milk (Special Designations) Regulations, Licences to Bottle & Sell Milk, Inspection of Pasteurisation and Sterilisation Plants, Sampling for Efficiency of Heat Treatment, Compliance with Licence Standards, Sampling of School Milk, Sampling of Milk Supplied to Institutions.</p> <p>Butter & Margarine Factories, Artificial Cream Regulation.</p> <p>Registrations, Reports and Legal Proceedings.</p>	<p>Food and Drugs Act, Sampling, Preservatives in Foods, Inspection & Registration of Food Preparing Premises.</p> <p>Meat Inspection, Public Health (Meat) Regulations: Examination of all Animals Slaughtered in Public Abattoir and Slaughterhouses.</p> <p>Inspection of Meat Shops, Markets and Stalls, Emergency Slaughter—Casualties, Foot & Mouth Disease, etc. Issue of Certificates Regarding Meat Condemned, Condemned Meat—Supervision of Disposal.</p> <p>Slaughter of Animals Act, Licences to Slaughter, Records Charges and Accounts, Pharmacy & Poisons Act, Fertilisers & Feeding Stuffs Act, Merchandise Marks Act. Agricultural Produce Act. Destructive Insects & Pests Act. Noxious Weeds.</p> <p>Hygiene of Food Premises. Inspection of Canned & Other Foods, Sampling for Chemical Analysis.</p> <p>Investigation into Food-Borne Epidemics, Sampling for Bacteriological Examination, Collection of Specimens, Visits to Contacts.</p> <p>Registrations, Licences and Legal Proceedings.</p>	<p>Public Health Act.</p> <p>Port Sanitary Regulations.</p> <p>Public Health (Aircraft) Regulations.</p> <p>Imported Food Regulations.</p> <p>Preservatives in Food Regulations.</p> <p>Health of Crew—Enquiries.</p> <p>Infectious Disease Enquiries.</p> <p>Veneral Disease Information.</p> <p>Ship Inspection.</p> <p>Hygiene of Crew Accommoda- tion.</p> <p>Ship Drinking Water Supplies.</p> <p>Inspection of Imported Food.</p> <p>Sampling of Food.</p> <p>Disposal of Unfit Food.</p> <p>Rat Destruction Measures.</p> <p>Issue of Deratisation Certificates and Exemptions.</p> <p>Disinfestation of Ships and Dock Premises.</p> <p>Disinfection.</p> <p>Inspection of Canal Boats.</p> <p>Dock Area Sanitation.</p>
<p>RATS AND MICE DESTRUCTION</p> <p>Prevention of Damage by Pests Act 1949. Rat Destruction, etc. Rat Proofing of Buildings.</p>		<p>HEALTH EDUCATION</p> <p>Lectures & Demonstrations to :— Various Organisations, including: Adult and Youth Clubs, Women's Guilds, Secondary Schools, Pre-Nursing Classes, Public Health Students, Red Cross Hygiene Classes, Domestic Entomology Classes, Film Shows.</p>		
<p>SANITATION</p> <p>Public Health Act, Complaints and Investigations, Abatement of Nuisances, Water Supplies (Purity and Sufficiency), Offensive Trades (Inspections and Registrations), Smoke Abatement,</p>				

(2) SHOPS AND YOUNG PERSONS (EMPLOYMENT) ACTS.

By E. G. H. Spencer (Chief Shops Inspector).

Shops Act, 1950.

On October 1st, 1950, when the Shops Act, 1950, came into operation, the following enactments were repealed:—

- (1) The Shops Act, 1912.
- (2) The Shops Act, 1913.
- (3) The Shops (Hours of Closing) Act, 1928.
- (4) The Hairdressers' and Barbers' Shops (Sunday Closing) Act, 1930.
- (5) The Shops Act, 1934.
- (6) The Shops Act, 1936.
- (7) The Retail Meat Dealers' Shops (Sunday Closing) Act, 1936.
- (8) The Shops (Sunday Trading Restriction) Act, 1936.

The provisions of the new Act are substantially the same as those repealed, and local "Closing Orders" etc., made under the old Acts remain effective as if made under the present Act.

Gowers Committee Report.

This consolidation will ease many of the administrative difficulties formerly experienced, but it is to be regretted that for the time being, at least, it has not been found possible to include any of the improvements recommended by the "Gowers Committee" in March, 1949, which would materially improve the health and safety conditions of persons employed in the distributive trades. This Committee recommended, *inter alia*, that the following should be provided in shops and other premises not subject to the Factory Act:—

- (i) Fire escapes.
- (ii) Safety guards, fences, etc., to dangerous machinery.
- (iii) First-aid cabinets.
- (iv) Individual clothing lockers.
- (v) Provision of a minimum of 400 c.f. per person in every room in which employees work.
- (vi) Cleansing of walls and ceilings at intervals prescribed by enforcement authorities.
- (vii) Other such welfare matters including:—

Prohibiting the employment of women in shops during the seven weeks following confinement, and the lifting of excessive weights by women.

The foregoing is not, of course, a comprehensive statement of all the recommendations, but merely examples of what may be expected in future legislation.

When it was first learned that the new Act was a consolidating measure only, a report was submitted to the Medical Officer of Health. A meeting was then arranged between a representative of the Town Clerk's Department and the Chief Shops Inspector. As a result of this consultation, the Town Clerk reported to the Law Committee—"That it was considered that some assurance should be obtained that the promotion at the present time of a Consolidating Bill by the Government was not intended to indicate that the recommendations of the

Gowers Committee will not be put into effect." The Law Committee decided that such an assurance should be asked for and a communication on those lines was therefore forwarded to the Association of Municipal Corporations by the Town Clerk.

Arising out of this, it is interesting to note the reply given by the Home Secretary in the following extract from "Hansard" dated 21st July, 1950.

Mr. Padley asked the Home Secretary "when legislation will be introduced to amend the Shops Acts, in the light of the recommendations of the Gowers Committee, and if he will give an assurance that he will consult with the various interests in the distributive trades before such legislation is introduced."

Mr. Ede : "I recognise the importance of this matter and am keeping it in view, but regret that I cannot at present say when it will be practicable to introduce amending legislation. I am glad to give the assurance for which my hon. friend asks in the second part of the question."

Other Enactments.

- (a) The Young Persons (Employment) Act, 1938.
- (b) The Sunday Entertainments Act, 1932.

There have been no changes in this protective legislation, which is administered by the Shops Inspectors in addition to their duties under the Shops Act.

Routine Inspections.

During the year 5,975 visits and 1,267 revisits were made under the Shops Act: 51 visits and 3 revisits under the Young Persons (Employment) Act: and 93 visits and 17 revisits under the Sunday Entertainments Act (see detailed summary.)

841 infringements were revealed as a result of these routine visits, which were dealt with as follows:—

Verbal warnings	828
Written warnings	9
Prosecutions	4

The prosecutions were in each case taken against employers who had ignored previous warnings, both verbal and written. They were all concerned with assistants' working conditions.

Exemptions from Evening Closing.

Exemptions were granted in respect of the following exhibitions:—

- (i) The Bristol Horticultural and Chrysanthemum Society, at the Drill Hall, Old Market Street.
- (ii) The 6th Annual Horticultural Show, organized by the Small Holdings and Allotments Committee.

Winter Closing.

The war-time regulations fixing earlier closing hours for shops during the winter months was to have expired on December 10th, 1950. They have, however, been continued in force until December 10th, 1951, by an Order in Council.

Staff.

There have been no changes during the year and the present staff consists of :-

Chief Inspector	(M)	1
Inspectors	(M)	2
Inspector	(F)	1
		<hr/>
Total		4

all of whom are members of the Institute of Shops Acts Administration.

National Conference.

The Annual Conference of the Institute of Shops Acts Administration was held in Scarborough in September, 1950, and was attended by the Chief Inspector.

SUMMARY OF VISITS
SHOPS ACT, 1950

1949								1950
	<i>Visits—</i>							
5,282	Retail	...	...	...	...	...	...	5,682
126	Wholesale	...	...	...	...	...	...	293
	<i>Revisits—</i>							
967	Retail	...	...	...	...	...	...	1,201
22	Wholesale	...	...	...	...	...	...	66
	<i>Infringements—</i>							
589	Failure to exhibit notices	...	...	...	...	...	...	712
97	Half-Holiday and Compensatory Holiday	...	...	...	...	...	...	75
20	Hours of Young Persons	...	...	...	...	...	...	9
40	Meal Intervals	...	...	...	...	...	...	32
*200	Verbal Warnings	...	...	...	...	...	...	822**
31	Warning Letters	...	...	...	...	...	...	9
1	Legal Proceedings	...	...	...	...	...	...	4
140	Assistants' Facilities Referred to C.S.I.	...	...	...	...	...	...	113

YOUNG PERSONS (EMPLOYMENT) ACT, 1938

138	<i>Visits</i>	...	...	...	...	...	...	51
3	<i>Revisits</i>	...	...	...	...	...	...	3
4	<i>Infringements—</i>							
	Night employment and hours	...	...	...	...	...	...	3
	Records	...	...	...	...	...	...	4
	Meal Intervals	...	...	...	...	...	...	3
	Half-Day and Compensatory Holiday	...	...	...	...	...	...	2
3	Verbal Warnings	...	...	...	...	...	...	5

SUNDAY ENTERTAINMENTS ACT, 1932

84	<i>Visits</i>	...	...	...	...	...	...	93
10	<i>Revisits</i>	...	...	...	...	...	...	17
	<i>Infringements—</i>							
4	Holidays	...	...	...	...	...	...	—
4	Records	...	...	...	...	...	...	1
4	Verbal Warnings	...	...	...	...	...	...	1
Nil	Reported to Licensing Justices	...	...	...	...	...	...	Nil
<i>Work undertaken by Inspectorial Staff outside normal Office Hours</i>								
128½ hours	Evenings	...	...	...	...	...	...	49 (82½ hours)
33 hours	Sundays	...	...	...	...	...	...	21 (55½ hours)

* 1949 ONLY includes warnings given concerning infringements with regard to closing hours, Assistants' half holidays, Young Persons hours, and meal intervals.

** 1950 INCLUDES as 1949 Plus minor infringements such as failure to exhibit notices etc.

(3) METEOROLOGICAL OBSERVATIONS 1950

By H. H. Harding, F.R.MET. SOC.
Frampton Cotterell, Nr. Bristol.

(From observations taken daily at 9 a.m., rainfall being entered to previous day).

Mean pressure at 9 a.m. G.M.T. (corrected)	29.914 inches
Departure from average 32 years	— 0.039 inches
Greatest pressure	30.522in. on March 6th
Least pressure	29.019in. on Feb. 13th
Extreme range	1.503 inches
Total rainfall at Bishopston (St. Andrew's Park)	42.75 inches
Departure from average at Clifton (39 years)	+ 7.66 inches
Number of rainy days	213
Heaviest fall in 24 hours	1.75in. on Aug. 17th
Total fall at Frampton Cotterell	37.37in.
Departure from average	+ 5.83in.
Number of rainy days	210
Departure from average	+ 26
Days with 0.04ins. or more	158
Days with less than 0.04ins.	52
Days with trace (less than 0.005)	22
Heaviest fall in 24 hours	1.48in. on Nov. 20th
Mean humidity at 9 a.m.	83.8%
Mean temperature	49.6 degrees
Departure from average	+ 0.2 degrees
Maximum temperature in screen	86.8 degrees on June 8th
Maximum temperature in sun	121 degrees on June 5th
Minimum temperature in screen	17 degrees on Dec. 15th
Minimum temperature on grass	9 degrees on Dec. 16th
Extreme range in screen	68.8 degrees
Mean of warmest day	75.8 degrees on June 1st
Mean of coldest day	24.7 degrees on Dec. 15th
Hours of bright sunshine (estimated)	1,357
Departure from average	— 182
Days of bright sunshine	109
Days entirely overcast	91
Days with snow	10
Days with thunder	17
Days with fog	72
Days with frost	55
Days with ground frost	109

(4) THE REPORT OF THE PUBLIC ANALYST AND OFFICIAL AGRICULTURAL ANALYST FOR THE CITY AND COUNTY OF BRISTOL FOR THE YEAR 1950.

By E. G. Whittle, B.Sc. (Lond.), F.R.I.C.

Introduction

The year 1950 has proved to be the busiest one that this laboratory has ever experienced. The number of examinations made has reached the new high record of 5,091. This is an actual increase of some 1,000 examinations over 1949 and, having regard to the complete absorption of some 500 gas examinations made in that year, represents an overall increase of 1,500. This achievement reflects great credit upon my most co-operative and enthusiastic staff. All have shared in this great effort and it is perhaps invidious to single out any member for special mention, but I pay tribute to my Deputy for his great help and to my typist who has bravely tackled a vastly increased amount of reporting and records.

The main increases in the work have resulted from a great stepping-up of Food and Drug sampling and a big rise in the number of miscellaneous samples. Thus the number of Food and Drugs rose from 974 in 1949 to 1,733 in 1950, whilst the miscellaneous samples were 500 in 1949 and 860 in 1950.

The Spectrophotometric section came into operation in September and, after certain expected teething troubles with the apparatus, is beginning to prove of great value to the Department.

Actual examinations by no means represent the full effort of the department. Much advice has been given to many Corporation Departments and other bodies. Your Analyst is also a Lecturer in Hygienic Chemistry in the University and serves on various committees concerned with Smoke Abatement and other matters.

When I had the honour to be appointed as Public Analyst in February 1947 it was apparent that the Department was in dire need of complete reorganisation and much new equipment if it was to meet the needs of modern legislation in Food and Drugs. It was further obvious that it would not be possible to complete the task for something like four years. 1950 has seen the practical fulfilment of the policy and has shown also, in increased examinations, what the reorganised department is really capable of doing.

The department has been reorganised into specialised units to deal with Milk; Waters; General Food and Drugs; Optical work, Food Research; General Stores; and Spectrophotometry, whilst being kept sufficiently elastic to deal with all problems likely to be encountered in modern Public Analyst practice.

Re-equipment has proceeded smoothly, if somewhat slowly, and is now nearly complete as far as present Food and Drug legislation requires.

The policy now becomes one of consolidation and keeping pace with modern developments in Food and Drug Analysis and it is hoped that the department may find opportunities for research work upon analytical problems which confront us from time to time, and which, in the past, we have been unwillingly forced to shelve.

Finally I must record my thanks to Mr. M. G. Wintringham, Senior Inspector of the Food and Drug Section, and his inspectors for their willing co-operation and assistance in all matters relating to sampling.

The Report is divided into nine main sections as under :—

Part I	Food and Drugs Act.
Part II	Fertilisers and Feeding Stuffs Act.
Part III	Waters, Swimming Bath samples, Effluents and Sewage Chlorination.
Part IV	Rag Flock Act.
Part V	Miscellaneous Analyses.
Part VI	Pharmacy and Poisons Act.
Part VII	Atmospheric Pollution.
Part VIII	Spectrophotometry.
Part IX	Other Activities.

SUMMARY OF EXAMINATIONS 1950.

Table 1

Milks	1,104
Food and Drugs	1,733
Miscellaneous	813
Rag Flock	15
Fertilisers and Feeding Stuffs	57
District Inspectors	47
Poisons and Pharmacy	4
Water, Swimming Baths, etc.	388
Atmospheric Pollution	
Gauges and Lead Peroxide	204
Continuous Smoke Filters	280
Spectrophotometric Analyses	110
Chlorination, visits and examinations	187
Control of water supplies to Hospitals	149
Total Examinations	5,091

PART I

Food and Drugs Act

The main item of the year's work is, of course, the analysis of Food and Drugs and the samples examined covered practically every type of food.

Serious adulteration of food and drugs is now of rare occurrence and this is undoubtedly due to the regular and wide degree of sampling making it increasingly difficult for adulteration to be practised without risk of detection. With certain perishable products which may be consumed soon after preparation there is, however, a chance of adulteration and for that reason such goods receive more attention from the Food Inspectorate.

For some time it has been considered that the main classification of "genuine" or "adulterated" do not give the full picture of the analytical or other examinations made in the laboratory. It may well be that a food is genuine enough in composition but, for example, may have become infested owing to adverse storage. Thus following a general appreciation of the need for some modification, samples will in future be designated as "genuine" or "adulterated or otherwise irregular."

New Legislation : Statutory Instruments

In the field of new legislation in food and drug work the following items are of interest :

Statutory Instrument 1950 No. 876 The *Cream* Order, replaced the Cream (Production and Sales) Order 1940. The Order prohibits the manufac-

ture or supply of cream except under licence and the obtaining of cream except from the holder of a licence.

It also restricts the serving of clotted cream by catering establishments to a specified area, namely, the counties of Cornwall, Devon, Dorset, Gloucester, Somerset and Wiltshire; and imposes a maximum price for clotted cream except when supplied as part of a meal by a catering establishment in the specified area.

Statutory Instrument 1950 No. 1056 *The Food Standards (Preserves) (Amendment) Order 1950*.

This amending Order raises the minimum fruit content of some twelve varieties of jam and fixes a standard for Raspberry and Loganberry jam. The Order comes into operation by stages, in respect of sales by manufacture on 25th September, 1950; and in respect of sales by wholesale and retail on dates to be appointed.

Statutory Instrument 1950 No. 1239 *The Mineral Oil in Food (Amendment) Order 1950*.

This amending Order provides that the prohibition in the principal Order relating to mineral oil in food shall not apply in relation to dried fruit containing not more than 1 part by weight of mineral oil per 100 parts by weight of dried fruit, and makes provision with regard to articles of food containing mineral oil by reason of the inclusion therein of dried fruit containing mineral oil. Dried fruit is defined as prunes, currants, sultanas and raisins.

This is intended only as a temporary measure and the Minister of Food explained that large stocks of dried fruit intended for distribution before Christmas had been treated with mineral oil in the countries of origin as a deterrent to infestation, to prevent crystallisation, and to facilitate separation of the berries in manufacturing processes.

Further, exporting countries have been requested to stop the use of mineral oil for the treatment of dried fruit intended for the United Kingdom.

Statutory Instrument 1950 No. 589 *The Food Standards (Fish Cakes) Order 1950* maintains the standard for fish cakes at not less than 35 per cent. of fish.

Statutory Instrument 1950 No. 596 *The Soft Drinks (Amendment) Order 1950* prescribes specifications for the ingredients of all soft drinks containing citrus fruit juice and barley.

Statutory Instrument 1950 No. 1430 *Food (Chocolate, sugar confectionery and cocoa products) (Amendment No. 3) Order 1950* amends the Order of 1949 by providing a new definition of sugar confectionery.

An important legal decision in connection with vinegar is worthy of note.

In the case of *Kat. v. Diment*, 21st July 1950, in the High Court of Justice, Kings Bench Division, the Chief Magistrate of the Metropolis held that the application of the description "non-brewed vinegar" to a solution of *synthetic acetic acid* put up as a condiment was a false trade description and an offence against the Merchandise Marks Act. The decision was upheld by the Divisional Court and caused the withdrawal of the Code of Practice relating to Vinegar and Solution of Acetic Acid as printed in "The Advertising, Labelling and Composition of Food". The trade-name for solutions of synthetic acetic acid has now become "non-brewed condiment".

An Order, in force on 5th November 1950, raised the minimum meat content of *pork sausages* and pork sausage meat (including pork slicing meat)

from 50 to 65 per cent. and also increased the maximum wholesale and retail prices of such sausages together with beef sausages.

A point of analytical importance concerned the method of reporting the presence of *arsenic in food* and it was agreed that in future reports should be made in terms of arsenic, as and not arsenious oxide As_2O_3 as hitherto. The main effect is that the limit of arsenical contamination of foodstuffs is now as follows:—

Beverages (ready to drink) maximum of 0.1 parts per million as As.
Foods (unless otherwise specified) maximum of 1.0 parts per million as As.

Finally two recommendations of the Food Standards Committee should be mentioned.

An interim standard for *Ice Cream* proposed a minimum of 5 per cent. fat, 10 per cent. sugar and $7\frac{1}{2}$ per cent. milk solids as the highest standard that could reasonably be introduced under present circumstances. (NOTE: Statutory Instrument 1951 No. 13. The Food Standards (Ice Cream) Order 1951 was made on 1st January 1951, and comes into operation on 1st March 1951.)

The same committee acting upon the Medical Research Council's recommendation as endorsed by the Ministry of Health reported that prophylaxis against thyroid enlargement and goitre by the general use of *iodised salt* was desirable in Great Britain. Within one year of a Statutory Instrument designed for that purpose, all pre-packed free-running salt would be required to contain not less than 15 and not more than 30 parts of iodine per million of salt and within two years this would apply to the other pre-packed salt. In consequence it is considered that cut lump salt would disappear because it is technically impossible to add iodide.

Table 2

Nature of sample	Total	Number genuine	Number adulterated or otherwise irregular
Milk	1104	1072	32
Condensed Milk	23	23	—
Dried Milk	4	4	—
Ice Cream	160	160	—
Ice Lolly	13	13	—
Butter	37	37	—
Margarine	30	30	—
Cooking Fat	31	31	—
Suet	10	9	1
Dripping	1	1	—
Lard	1	1	—
Cheese	23	23	—
Ground Coffee, Coffee and Chicory Essence and Coffee Essence	35	35	—
Tea	3	3	—
Cocoa	6	6	—
Gelatine	33	31	2
Baking Powder	16	16	—
Golden Raising Powder	7	7	—
Jelly, Jelly Powder and Jelly Crystals	12	12	—
Mixed Spice	20	20	—
Tinned Fruit, Vegetables, Fish and Meat	57	55	2
Sausage and Sausage Meat	168	154	14
Luncheon Sausage and Polony	4	4	—
Vinegar	33	33	—
Pepper and Pepper Compound	24	24	—
Mustard	8	8	—
Salad Cream and Mayonnaise	42	41	1
Meat and Fish Paste	59	55	4
Fish Cakes	3	3	—
Beans in Tomato Sauce	13	13	—
Curry Powder	21	20	1
Soup Powder, Soup and Broth	16	16	—
Tomato Puree	1	1	—
Stuffings and Seasonings	41	39	2
Pickles and Chutney	13	13	—
Cider	13	13	—
Beer	24	24	—
Mineral Water	46	46	—
Fruit 'Squash and Non-alcoholic Wine	17	17	—
Saccharin Tablets	19	19	—
Lemon Barley Water	2	2	—
Marzipan and Almond Paste	7	7	—
Ground Almonds	9	9	—
Glacé Fruits	12	12	—
Mixed Candied Peel	9	9	—
Peas (Garden)	1	1	—
Dried Peas	2	2	—
Dried Fruit	25	25	—
Cocktails	5	5	—
Liqueurs	6	6	—
Wines	5	5	—
Sherbet	4	1	3
Dried Egg	8	8	—
Mock Cream	2	2	—
Seedless Fig and Sunflower Meal	1	1	—
Perry	1	1	—

TABLE 2.—*Continued*

Nature of sample	Total	Number genuine	Number adulterated or otherwise irregular
Marmite	1	1	—
Table Salt	2	2	—
Essences, Colourings and Flavourings	35	35	—
Sauce and Ketchup	15	15	—
Cider Vinegar	1	1	—
Non-brewed Condiment	14	14	—
Gravy Browning and Flavouring	10	10	—
Yeast Extract	1	1	—
Bournvita	1	1	—
(1) Sugar	49	46	3
(2) Starchy Foods	149	148	1
(3) Spirits	39	37	2
(4) Drugs	230	225	5
Total	2837	2764	73

Adulteration rate of all samples 2.57 per cent.

Of the 2,837 samples examined 443 were sealed, having been divided in accordance with the provisions of section 70 of the Food and Drugs Act 1938, and 2,394 were unsealed.

Comparative figures for adulteration in Bristol for the last five years are given in Table 3.

Table 3

	1946	1947	1948	1949	1950
Total number of samples ...	2,272	2,068	2,527	2,184	2,837
Milk, per cent. adulterated ...	5.82	4.92	4.06	1.73	2.90
Food (other than milk) per cent. adulterated	2.56	1.61	2.58	2.67	2.39
Drugs, per cent. adulterated ...	2.84	3.22	1.31	11.11	2.17
Total per cent. adulterated ...	4.84	3.72	3.56	2.15	2.57

Milk

Of the thirty-two samples condemned, 27 were deficient in fat; 4 gave evidence of added water; and one was deficient in fat and contained added water.

Table 4 gives the figures for samples containing added water.

Table 4

Lab. No.	Analytical Data			Result
	Fat	Non-fatty solids	Freezing point Δ depression $^{\circ}\text{C}$	
V. 85	3.50	7.10	0.472	16.4% added water
V. 200	4.50	7.60	0.516	10.6% " "
X. 333	4.55	8.20	0.518	3.5% " "
X. 343	3.45	7.90	0.515	7.0% " "
Note				
V. 108	2.30	8.05	Too acid for Δ	19% deficient in fat and 5.3% deficient in non-fatty solids.

Table 5

					Samples of milk	
					condemned for deficiency in fat	condemned for added water
1st Quarter	...	...	...	...	—	—
2nd	"	...	...	...	17	1
3rd	"	...	...	...	8	1
4th	"	...	...	...	2	2
					—	—
					27	4
					—	—

Forty-five samples were reported as abnormal, being low in non-fatty solids, and four as suspicious, due to slight deficiencies of fat or very small amounts of added water.

During the year 68 determinations were made for the freezing point of milk. In eight cases the freezing point depression was below 0.530.

Table 6

Lab. No.	Δ	Non-fatty Solids %	Comment
Z. 48	0.528	8.38	Suspicious
V. 62	0.527	8.45	"
V. 85	0.472	7.10	16.4% added water
V. 200	0.516	7.60	10.6% " "
X. 294	0.529	7.95	Suspicious
X. 333	0.518	8.20	3.5% added water
X. 340	0.520	8.63	Suspicious
X. 343	0.515	7.90	7.0% added water

Average composition of genuine milks for 1950

Table 7

Month	Number for each month	Specific gravity	Fat %	Non-fatty solids %
January	104	1032.0	3.67	8.85
February	77	1032.0	3.60	8.83
March	53	1031.4	3.52	8.75
April	69	1031.6	3.45	8.79
May	106	1031.7	3.55	8.83
June	52	1031.2	3.55	8.69
July	46	1031.2	3.70	8.80
August	60	1031.7	3.64	8.76
September	88	1032.3	3.83	8.94
October	126	1031.6	3.92	8.84
November	148	1031.6	4.14	8.88
December	94	1031.6	4.08	8.92
Average for year	1023	1031.7	3.77	8.84
	(total)			

The above table does not include milk samples reported as suspicious and abnormal.

The average figures for all samples of milk examined during the year were as follows:—

Specific gravity	-	-	-	1031.6
Fat	-	-	-	3.74%
Non-fatty solids	-	-	-	8.81%

At the request of the Chief Food and Drug Inspector a special search was made for the presence of hypochlorite in 41 formal and 74 informal samples of milk. In no case was the preservative found. It had been suggested that traces of hypochlorite might have caused difficulties with the methylene blue test.

It is not proposed to deal with every type of foodstuff analysed but to select items which were heavily sampled and to add comment particularly in cases of adulteration or other irregularity.

Fatty Substances

Of the following samples examined only one, a suet, was found to require adverse comment.

Table 8

Butter	37
Margarine	30
Cooking Fat	31
Shredded Suet	10
Dripping	1
Lard	1
Cheese	23
	133

The average analytical detail may be summarised thus:—

Table 9

<i>Butter</i>	Moisture	14.8 per cent.
	Reichert	29.2
	Boric Acid	nil
<i>Margarine</i>	Moisture	14.4 per cent.
	Boric Acid	0.18 "
	Starch	Absent "
<i>Cheese</i>	Moisture	36.2 "
	Fat	32.7 "
	Fat on dry basis	47.0 "
	Reichert	26.1 "
<i>Cooking Fat</i>	Acidity as Oleic	
	Acid	0.10 "
	Starch	Absent "
	Moisture	nil
<i>Lard</i> (only one sample submitted as such)		
	Acidity as Oleic	
	Acid	0.04 "
<i>Dripping</i>	Acidity as Oleic	
	Acid	0.65 "
	Starch	Absent "
	Moisture	nil
<i>Shredded Suet</i>	Moisture	1.0 "
	Fat	87.4 "

One sample of shredded suet was found to be slightly deficient in fat. In general the starch in shredded suet now appears to be wheat starch presumably because of shortage of rice starch.

Gelatine

Thirty-three samples were examined for compliance with the Edible Gelatine Order. Thirty-one samples satisfied the requirements in respect of limits for arsenic, lead and copper, zinc and ash content.

Adverse comment in two cases for: (a) Slightly excessive amounts of copper and (b) for unpleasant odour on warming.

Canned Fruit, Vegetable, Fish and Meat

Of 57 samples examined only three were returned as adulterated or of inferior quality. These were samples of home canned vegetables found to be somewhat deficient in salt content.

Twenty-one samples of home canned fruits were examined and included: gooseberries, plums, apples, rhubarb and blackcurrants. Good correlation was obtained between the determinations of sugars (sucrose) from refractive index, specific gravity and titration (Lane and Eynon method) and the amount found was seriously below that required by the Order. Communication with the Ministry and with the Campden Research Station revealed great difficulties in chemical examination of canned fruits and the Ministry decided that the best safeguard of the consumer's interests would be to rely on regular visits to the canneries by their inspectors who would check weights and syrup densities. It is most unfortunate that public analysts will therefore have little opportunity of checking whether regulations have been observed.

Ice Cream

Table 10

Month	Ranges % Fat	% Total Solids	Number of samples	Comment samples below 5% fat
January	3.9 — 17.0	23.5 — 56.7	12	one at 3.9
February	8.2 — 13.8	34.0 — 34.9	4	—
March	4.8 — 13.2	24.3 — 29.7	3	one at 4.8
April	8.7 — 11.9	21.9 — 47.3	5	—
May	5.3 — 13.6	22.9 — 40.5	27	—
June	2.7 — 15.1	21.5 — 52.4	41	one at 4.9 one at 2.7
July	5.2 — 13.0	20.4 — 42.4	18	—
August	7.6 — 14.3	28.3 — 39.8	11	—
September	4.6 — 12.1	25.6 — 40.0	12	one at 4.6
October	4.5 — 13.4	27.6 — 38.5	16	one at 4.5
November	8.2 — 19.3	26.2 — 47.1	11	—
December	—	—	—	—
			160	

The above table summarises the analytical data upon the samples of ice cream examined during the year.

Samples with fat content less than 5 per cent. - - - 6

Samples with fat content more than 5 per cent. and less than
8 per cent. - - - 35

Samples with fat content more than 8 per cent. - - - 119

160

The average fat content of the 41 samples (below 8 per cent.) was 6.35 per cent. The average fat content of all samples was 9.5 per cent.

This represents a remarkable improvement in the quality of ice cream over 1949 when only 37 samples of 189 examined contained more than 8 per cent. of fat. Metals and preservatives were not detected in any of the samples examined.

Thirteen samples of ice lollies were found to consist mainly of sucrose and citric acid with various flavourings and colourings. All were reported free from undue metallic contamination.

Sausages

One hundred and sixty-eight samples were examined for conformity with regulations in respect of meat content and freedom from preservatives (SO₂) (or quantity present were declared).

Fourteen samples were deficient in meat content and were reported to the Ministry of Food for action.

Salad Cream

Forty-one samples were reported as satisfactory. One sample was returned as deficient in oil.

Difficulties were experienced in determining the dried egg yolk solids using the P₂O₅ method of assessing the lecithin figure and hence the egg solids. A survey of seventeen samples by a new method based upon the choline content of eggs indicated 1.4 to 3.5 per cent. dried egg yolk solids. The method has limitations inasmuch as choline is also present in mustard which is itself a common ingredient of salad creams. It would appear, however, that if the total choline fails to represent 1.35 per cent. of dried egg solids there is a

reasonable presumption of deficiency in egg content. A method of determining the mustard content of salad cream would be of great value since correction for the choline content of mustard could then be applied.

Starch Foods

Of 149 samples submitted 77 were examined primarily for infestation and one sample of semolina was condemned on account of heavy infestation with mite.

Fifty-one samples of cakes were examined for compliance with the Mineral Oil in Food Order. No excessive amounts of mineral oil were found although in a few instances the unsaponifiable matter was greater than the 0.2 per cent. permitted. No action was taken since it is obvious that account must be taken of unsaponifiable matter due to the fats used in preparation of the cakes.

The remaining samples included plain and self-raising flour, custard powder and semolina. The self-raising flours were examined for available carbon dioxide and for compliance with the Fluorine in Food Order.

Sugars and Sugar Products

The table summarises the types of sugar products examined.

Table 11

<i>Description</i>	<i>No. of samples</i>
Sugar	8
Jam	30
Maple Syrup	2
Sweetmeats	5
Marmalade	2
Lemon Curd	1
Lemon Cheese	1
	<hr/> 49 <hr/>

Sugars gave percentage purity of between 98 and 100 per cent. Sucrose with one sample of Demerara at 97.4 per cent.

The soluble solids in the jams ranged from 67 to 75 per cent., with one exception at 66.5 per cent. A formal sample of this product proved to be satisfactory.

Two formal samples of maple syrup showed the presence of dextrin and invert sugar and were seriously deficient in sucrose. An earlier sample submitted by the Chief Sanitary Inspector had been reported as containing not more than 30 per cent. of true maple syrup and at least 70 per cent. commercial starch glucose. The formal samples X.D.422 and Y.D.392 probably contained respectively at least 75 per cent. and 65 per cent. of commercial starch glucose. In the early sample exception was taken to the type of labelling and to certain deficiencies in the declared contents of the jar. The whole matter was later referred to the Ministry of Food for information and necessary action.

Spirits

Thirty-nine samples of whisky, gin, and rum were examined and two were returned as adulterated. Because of certain technical difficulties in dealing with the small quantities of sample available no action was taken in one case whilst in the other a caution was issued.

Meat and Fish Paste

Of 59 samples examined 55 proved to be satisfactory. In the remaining four the following deficiencies were noted:

V. D. 65	Veal and Ham Paste	Informal	20%	Deficient in meat.
V. D. 75	„ „	Formal	10.7%	„ „
W.D. 32	Lobster Fish Paste	Informal	12%	Deficient in fish.
W.D. 54	„ „	Formal	8.7%	„ „

These findings were referred to the Ministry of Food for necessary action.

Curry Powder

All but one sample of the twenty examined complied with the Curry Powder Order in respect of spices, salt and lead. The one sample contained lead equivalent to 17 parts per million or 7 parts per million in excess of the permitted maximum.

Stuffings and Seasonings

Forty-one samples were examined and two were returned as containing excessive siliceous matter. In the absence of statutory standards no action was taken, but considerable assistance was given by the County Analyst for Lancashire, in permitting a study of similar matters considered by the Lancashire authorities in 1948. His kind assistance is gratefully acknowledged.

Sherbet

Four samples were examined and only one appeared to be a true sherbet. The remaining three contained no sodium bicarbonate and were therefore non-effervescent. The vendors were cautioned.

Essences and Flavourings

Whilst none of the 35 samples examined were returned as adulterated a number were found to be decidedly acid by reason of the hydrolysis of the esters used. Thus acetate and benzoate esters developed acetic and benzoic acid respectively. In some instances the degree of acidity may be so marked as to render the product unusable. It is considered that efficient stoppers to the containers of flavourings may do much to minimise development of acidity.

Vinegars and Non-Brewed Condiment

Thirty-five samples of vinegar and 14 of non-brewed condiment were returned as genuine. Reference is made on another page of this report to the *Kat v. Diment* case concerning solutions of synthetic acetic acid and such solutions are now described as non-brewed condiment. As such these consist of solutions of synthetic acetic acid suitably coloured. All other samples were correctly described.

Dried Egg

It has already been noted that certain samples of salad cream were examined for choline as a means of arriving at the dried egg yolk solids and in this same experimental work a series of six samples of dried egg gave choline contents of 11.6 to 13.0 mgms. per gram of dried egg (*Analyst* 1950, Vol. 75, p. 305 *et seq*). These figures are somewhat lower than those quoted by Daubney and Sexton for dried whole egg.

Drugs

Increased attention was given to the examination of Drugs in 1950. 230 were examined as compared with 54 in 1949. A list of the articles analysed or examined for labelling statements is appended. Five samples were returned as adulterated and adverse comment was passed upon the labelling of a lung and throat mixture. Calcium sodium lactate tablets were found to contain only calcium lactate and the stock was withdrawn for re-labelling.

Table 12

Sodium salicylate tablets	2	Olive oil	14
Sodium citrate tablets	3	Chemical food	6
Anadin tablets	2	Codliver oil	4
Calcium lactate tablets	4	Codeine tablets	4
Boracic ointment	14	Sulphur tablets	7
Zinc and castor oil ointment	5	Grey powder tablets	4
Sulphur ointment	5	Soda mints	4
Vitamin tablets	10	Glauber's salt	9
Bicarbonate of soda	4	Eucalyptus oil	2
Epsom salts	6	Phenacetin tablets	4
Camphorated oil	4	Wintergreen ointment	1
Tincture of iodine	4	Green ointment	1
Zinc ointment	9	Aspirin tablets	1
Hydrogen peroxide	12	Resorcin and sulphur paste	1
Cough mixture	8	Tannic acid compound jelly	1
Seidlitz powders	10	Lassar's paste	2
Glycerine and glycerine and		Morison's paste	2
thymol	2	Coal tar paste	1
Herbal medicines	3	Throat pastilles and lozenges	5
Calamine lotion	8	Bismuth mixture and tablets	3
Tonic Tablets	1	Bismuth Magnesium powder	1
Tonic wine	4	White embrocation	2
Vitamin syrup	4	Soap liniment	1
Cinnamon and quinine	1	Household embrocation	1
Ammoniated tincture of quinine	3	Family ointment	1
Liquorice powder	7	Germ ointment	1
Indigestion powders	2	Fruit salts	1
Friar's balsam	4	Lung and throat mixture	1
Tonic food	4		
	145		85

Table 13

X.D.190	Sulphur Tablets	Informal	14.8 per cent. deficient in sulphur
X.D.207	" "	"	13.6 per cent. deficient in sulphur
X.D.368	Morison's Paste	"	Deficient in exsiccated magnesium sulphate to the extent of 37.5 per cent.
X.D.410	" "	Formal	Deficient in exsiccated magnesium sulphate to the extent of 43.0 per cent.
			Proceedings pending.
Y.D.363	Hydrogen Peroxide		Deficient in hydrogen peroxide to the extent of 43.3 per cent. Formal sample in January 1951.
	(10 vol.) BP 1932	Informal	Proceedings pending.

Preservatives and Colouring Matter

No evidence of preservative or prohibited colouring was found in any of the staple foods during the year. The exception is of course margarine and amounts up to the permitted maximum of 0.25 per cent. boric acid were found.

All samples examined for sulphur dioxide preservative were found to comply with the Preservative Regulations.

Table 14

<i>Nature of sample</i>								<i>Number of samples</i>
Beef and Pork Sausages (Preserved)	.....	.....	.....	.....	.....	.....	.....	7
Gelatine	.....	.....	.....	.....	.....	.....	.....	2
Orange Squash	.....	.....	.....	.....	.....	.....	.....	3
Jam	.....	.....	.....	.....	.....	.....	.....	14
Fruit Cordial	.....	.....	.....	.....	.....	.....	.....	2
Fruit Squash	.....	.....	.....	.....	.....	.....	.....	7
Mineral water	.....	.....	.....	.....	.....	.....	.....	8
Vitamin syrup	.....	.....	.....	.....	.....	.....	.....	1
Gelatine	.....	.....	.....	.....	.....	.....	.....	18
Cider	.....	.....	.....	.....	.....	.....	.....	2
Beer	.....	.....	.....	.....	.....	.....	.....	2
Stout	.....	.....	.....	.....	.....	.....	.....	1
Ginger Wine	.....	.....	.....	.....	.....	.....	.....	1
Ribena	.....	.....	.....	.....	.....	.....	.....	1
Mixed Peel	.....	.....	.....	.....	.....	.....	.....	9
Glace Fruits	.....	.....	.....	.....	.....	.....	.....	4
Arrowroot	.....	.....	.....	.....	.....	.....	.....	2
Non-alcoholic wine	.....	.....	.....	.....	.....	.....	.....	1
Dry ginger ale	.....	.....	.....	.....	.....	.....	.....	1
								<hr/> 86 <hr/>

Benzoic acid was sought and detected in a few cases. In every instance the preservative was permitted and the amount within the prescribed limits.

No. of Sample	Samples submitted by Chief Sanitary Inspector under Food and Drugs Act. Nature of Sample	Formal/ Informal	Nature of Adulteration	Action taken
Cases brought forward from previous year and where action has now been completed.				
V. 349	Milk	FORMAL	6.6% deficient in fat	Cautioned by Town Clerk Case heard on 23-1-50—Granted absolute discharge on payment of £5-0-0 costs.
Z.D. 218	Whisky	FORMAL	8.0% added water	
W.D. 63	Whisky	FORMAL	4.0% added water	Case withdrawn, each party to pay their own costs.
V.D. 240	Whisky	FORMAL	6.0% added water	Case heard on 23-1-50—Granted absolute discharge on payment of £5 costs.
Samples reported not genuine in year 1950.				
V. 85	Milk	FORMAL	16.4% added water	Cautioned by Town Clerk. Referred to Weights & Measures Dept., Taunton, Somerset, for any action considered necessary.
V. 108	Milk	Informal	5.3% added water. 19% deficient in fat	
V. 126	Milk	Informal	11.6% deficient in fat	Whole consignment bulked proved genuine.
V. 127	Milk	Informal	10% deficient in fat	Whole consignment bulked proved genuine.
V. 133	Milk	Informal	6.6% deficient in fat	Whole consignment bulked proved genuine.
V. 134	Milk	Informal	6.6% deficient in fat	Whole consignment bulked proved genuine.
W. 53	Milk	Informal	6.6% deficient in fat	Whole consignment bulked proved genuine.
W. 57	Milk	Informal	10% deficient in fat	Repeat sample genuine.
W. 58	Milk	Informal	16.6% deficient in fat	Repeat sample genuine.
W. 75	Milk	Informal	10% deficient in fat	Whole consignment bulked proved genuine.
W. 78	Milk	Informal	10% deficient in fat	Whole consignment bulked proved genuine.

No. of Sample	Samples submitted by Chief Sanitary Inspector under Food and Drugs Act. Nature of Sample	Formal/ Informal	Nature of Adulteration	Action taken	
X. 11	Milk	Informal	5% deficient in fat	Whole consignment	proved
X. 21	Milk	Informal	8.3% deficient in fat	Whole consignment	proved
X. 19	Milk	Informal	23.3% deficient in fat	Whole consignment	proved
X. 22	Milk	Informal	6.6% deficient in fat	Whole consignment	proved
X. 51	Milk	Informal	11.6% deficient in fat	Whole consignment	proved
X. 70	Milk	Informal	6.6% deficient in fat	Whole consignment	proved
X. 98	Milk	Informal	5% deficient in fat	Whole consignment	proved
Y. 67	Milk	Informal	11.6% deficient in fat	Whole consignment	proved
X. 110	Milk	Informal	6.6% deficient in fat	Whole consignment	proved
X. 113	Milk	Informal	16.6% deficient in fat	Repeat sample genuine.	
X. 114	Milk	Informal	15% deficient in fat	Repeat sample genuine.	
W. 86	Milk	Informal	20% deficient in fat	Whole consignment	proved
W. 89	Milk	Informal	6.6% deficient in fat	Whole consignment	proved
X. 159	Milk	Informal	8.3% deficient in fat	Whole consignment	proved
X. 161	Milk	Informal	11.6% deficient in fat	Whole consignment	proved
X. 164	Milk	Informal	15% deficient in fat	Whole consignment	proved
V. 200	Milk	Informal	10.6% added water	Whole consignment	proved
X. 184	Milk	Informal	6.6% deficient in fat	Referred to County for action considered necessary. Whole consignment	proved

No. of Sample	Samples submitted by Chief Sanitary Inspector under Food and Drugs Act. Nature of Sample	Formal/ Informal	Nature of Adulteration	Action taken
W. 136	Milk	Informal	8.3% deficient in fat	Whole consignment bulked proved genuine.
X. 333	Milk	Informal	3.5% added water	Formal sample to be obtained.
X. 343	Milk	Informal	7% added water	Formal sample to be obtained.
V.D. 72	Canned Carrots	Informal	Deficient in salt to the extent of 24%	Repeat sample genuine.
V.D. 73	Tinned Peas	Informal	Deficient in salt to the extent of 40%	Repeat sample genuine.
Z.D. 140	Curry Powder	Informal	7 parts per million excess of lead	Repeat sample unobtainable.
W.D. 32	Fish Paste (Lobster)	Informal	Deficient in fish to the extent of 12%	Repeat formal sample taken.— See W.D.54.
W.D. 54	Fish Paste (Lobster)	FORMAL	Deficient in fish to the extent of 8.7%	Referred to Ministry of Food for necessary action.
W.D. 70	Gelatine	Informal	10 parts per million copper in excess of the maximum permitted	Repeat sample genuine.
Y.D. 68	Gelatine	Informal	Not free from objectionable taste and offensive odour on warming a 5% aqueous solution	Repeat sample genuine.
Y.D. 215	Herbs (Dried, Sage)	Informal	2.7% excess of acid-insoluble ash	Formal repeat sample obtained.
Y.D. 231	Herbs (Dried, Sage)	FORMAL	2.5% excess of acid-insoluble ash	—See Y.D.231.
Z.D. 286	Jam (Raspberry)	Informal	Deficient in soluble solids to extent of 2.0%	Cautioned by Town Clerk. Repeat sample genuine.
X.D. 422	Maple Syrup	FORMAL	Deficient in sucrose to extent of 75.4%	Referred to Ministry of Food.
V.D. 392	Maple Syrup	FORMAL	Deficient in sucrose to extent of 66.2% (Both of these samples contained undue amounts of dextrin and invert sugar)	Referred to Ministry of Food.
V.D. 65	Meat Paste (Veal and Ham)	Informal	Deficient in meat to the extent of 20%	Formal repeat sample taken—See V.D.75
V.D. 75	Meat Paste (Veal and Ham)	FORMAL	Deficient in meat to the extent of 10.7%	Referred to Ministry of Food for necessary action.
X.D. 112	Salad Cream	Informal	Deficient in edible oil to the extent of 29.6%	Repeat sample unobtainable.
V.D. 13	Sausages (Beef)	Informal	Deficient in meat to the extent of 15.2%	Repeat sample genuine.
V.D. 14	Sausages (Beef)	Informal	Deficient in meat to the extent of 18%	Repeat sample genuine.
V.D. 15	Sausages (Beef)	Informal	Deficient in meat to the extent of 11.8%	Repeat sample genuine.

No. of Sample	Samples submitted by Chief Sanitary Inspector under Food and Drugs Act. Nature of Sample	Formal/ Informal	Nature of Adulteration	Action taken
V.D. 33	Sausages (Beef)	Informal	Deficient in meat to the extent of 20.8%	Repeat sample genuine.
V.D. 45	Sausages (Pork)	Informal	Deficient in meat to the extent of 10.4%	Repeat sample genuine.
X.D. 26	Sausages (Pork)	Informal	Deficient in meat to the extent of 6.4%	Formal repeat sample taken—Genuine.
W.D. 14	Sausages (Beef)	Informal	Deficient in meat to the extent of 9.8%	Formal repeat sample taken.
W.D. 13	Sausages (Beef)	FORMAL	Deficient in meat to the extent of 12.4%	—See W.D.13. Referred to Ministry of Food for necessary action.
Z.D. 62	Sausages (Pork)	Informal	Deficient in meat to the extent of 12.4%	Repeat sample genuine.
V.D. 119	Sausages (Beef)	FORMAL	Deficient in meat to the extent of 17.4%	Referred to Ministry of Food for necessary action.
Z.D. 141	Sausages (Beef)	Informal	Deficient in meat to the extent of 10.2%	Repeat sample genuine.
X.D. 265	Sausages (Pork)	FORMAL	Deficient in meat to the extent of 9.8%	Referred to Ministry of Food for necessary action.
X.D. 352	Sausages (Beef)	FORMAL	Deficient in meat to the extent of 8.4%	Referred to Ministry of Food for necessary action.
V.D. 44	Sausage Meat (Pork)	Informal	Deficient in meat to the extent of 8.2%	Repeat sample genuine.
W.D. 25	Semolina	Informal	Infestation by Lepidoptera	Repeat sample unobtainable.
Y.D. 243	Sherbet	Informal	Contained no Sodium Bicarbonate	Retailer cautioned re misdescription of commodity.
Y.D. 244	Sherbet	Informal	Contained no Sodium Bicarbonate	Retailer cautioned re misdescription of commodity.
Y.D. 245	Sherbet	Informal	Contained no Sodium Bicarbonate	Retailer cautioned re misdescription of commodity.
V.D. 387	Suet (Shredded)	Informal	Deficient in fat to the extent of 3.6%	Formal repeat sample to be obtained.
Z.D. 331	Whisky	FORMAL	9.5% added water	Case not yet heard.
V.D. 388	Whisky	FORMAL	9.1% added water	Case not yet heard.
Y.D. 363	Hydrogen Peroxide	Informal	Deficient in Hydrogen Peroxide to the extent of 32%	Formal repeat sample to be obtained.
X.D. 368	Morison's Paste	Informal	Deficient in exsiccated magnesium sulphate to the extent of 37.5%	Formal repeat sample obtained.
X.D. 410	Morison's Paste	FORMAL	Deficient in exsiccated magnesium sulphate to the extent of 43%	—See X.D.410. Case not yet heard.
X.D. 190	Sulphur Tablets	Informal	14.8% deficient in sulphur	Repeat sample genuine.
X.D. 207	Sulphur Tablets	Informal	13.6% deficient in sulphur	Repeat sample genuine.

PART II. FERTILISERS

Table 15

No. F. & F.	Comment		
5/50	National 3 Fertiliser	.....	Satisfactory.
6/50			Water soluble Phosphoric Acid in excess of upper limit of variation but the excess is not to the prejudice of the purchaser.
9/50	Bone Meal	.....	Protein in excess of upper limit of variation but the excess is not to the prejudice of the purchaser.
10/50	Bone Meal	.....	Good average Bone Meal.—No Statutory Statement.
11/50			Satisfactory.
14/50			Ground Leather Waste and Shells. Ruling required as to whether this is a fertiliser within the meaning of the Act.
15/50	Growmore Fertiliser	.....	Soluble and insoluble Phosphoric Acid not in accordance with Statement. Potash in excess.
16/50			All ingredients outside upper limit of variation but not to the prejudice of the purchaser.
17/50	Liquid Manure	.....	3.6% deficient in nitrogen.
20/50	General Fertiliser	.....	Satisfactory.
21/50	Tomato Fertiliser	.....	17% deficient in potash.
22/50	Topdressing	.....	All ingredients outside the upper limit of variation but not to the prejudice of the purchaser.
23/50			Satisfactory.
24/50	National Growmore	.....	13.6% deficient in potash.
28/50	Dried Blood (Insoluble)		Satisfactory.
29/50	Tomato Fertiliser	.....	Satisfactory.
31/50	National Growmore Fertiliser		Satisfactory.
33/50	Bone Meal	.....	Phosphoric Acid in excess of the upper limit of variation but the excess is not to the prejudice of the purchaser.
34/50	Superphosphate	.....	Satisfactory.
35/50	No. 7 Granular Fertiliser		Satisfactory.
36/50	No. 1 Granular Fertiliser		Satisfactory.
37/50	Soluble Blood (Solution)		Satisfactory.
38/50	Muriate of Potash	.....	Satisfactory.
39/50	National No. 3 Fertiliser		Nitrogen in excess of the upper limit of variation but the excess is not to the prejudice of the purchaser.
50/50	Liquid Manure	.....	Satisfactory.
56/50			Satisfactory.
57/50			Satisfactory.

FEEDING STUFFS

Table 16

No. F. & F.		Comment
1/50	National Pig Food No. 2 (Fattening)	Satisfactory.
2/50	Poultry Food No. 1 A (Winter Layers)	7.5% deficient in protein.
3/50	Calf Starter Meal	Satisfactory.
4/50	Chick Starter Mash	Satisfactory.
7/50	National Poultry Food No. 1 (Laying)	Oil exceeds upper limit of variation but this is not to the prejudice of the purchaser.
8/50	National Poultry Balancer Meal	Regarded as a compound feeding stuff, the oil exceeds upper limit of variation but this is not to the prejudice of the purchaser.
12/50	Pig Food (Fattening)	Satisfactory.
13/50	National Poultry Food No. 1 (Pellets)	Satisfactory.
18/50	Growers Mash with Cod Liver Oil	Satisfactory.
19/50	Pig Fattening Meal	28.1% deficient in protein.
25/50	Barley Meal	Typical Barley Meal. Satisfactory.
26/50	Layers Mash	Oil exceeds upper limit of variation but this is not to the prejudice of the purchaser.
27/50	Nat. Cattle Food No. 1	Satisfactory.
30/50	Nat. Cattle Food No. 3	Satisfactory.
32/50	Nat. Cattle Food No. 4 (Nuts)	Satisfactory.
40/50	National Pig Food No. 2	Satisfactory blending in period under review. Oil figures in excess of upper limit of variation and in one case the protein figure is in excess of the upper limit. Fibre figures are all below the lower limit. Errors involved no prejudice to the purchaser.
41/50	(Experimental series)	
42/50		
43/50		
44/50		
45/50	National Poultry Food	Satisfactory blending in the period under review. Fibre figures in four cases below the lower limit of variation but the deficiencies are not to the prejudice of the purchaser.
46/50	No. 1 A	
47/50	(Experimental series)	
48/50		
49/50		
50/50		
51/50	Poultry Tonic Meal	Satisfactory.
52/50	Sow Weaners Meal	Satisfactory.
53/50	Pig Fattening Meal	Oil exceeds upper limit of variation but this is not to the prejudice of the purchaser.
54/50	Poultry Meal	No statement. Some oats present with considerable quantities of unidentifiable matter. Fibre seems abnormally high even for a poultry meal.
55/50	Poultry Yeast	Protein in excess of stated minimum quantity. Satisfactory.

FERTILISERS

Table 17

No. F. & F.	Nature of sample	% Phosphoric Acid			(P ₂ O ₅)		% (N)		K ₂ O	
		Soluble			Total		Nitrogen		Potash	
		G	F	G	G	F	G	F	G	F
5/50	National 3 Fertiliser	11.0	10.6	1.0			6.0	6.6		
6/50		5.5	6.5	1.0			6.5	6.8	10.5	9.8
9/50	Bone Meal			20.61			3.7	4.5		
10/50	Bone Meal		0.25			20.35		4.8		
11/50		5.0	5.65	2.0			5.0	5.05	7.0	7.0
14/50				(Not sold as fertiliser)						
15/50	Growmore Fertiliser	6.0	3.75	1.0			7.0	7.55	7.0	9.45
16/50		1.0	1.9	2.0			3.0	4.6	2.0	3.4
17/50	Liquid Manure						9.0	7.95	4.1	4.32
20/50	General Fertiliser	3.5	3.97	3.5	6.6	7.54	7.0	6.75	7.0	7.59
21/50	Tomato Fertiliser	4.0	4.5	4.0			6.0	6.7	10.0	8.3
22/50	Topdressing	6.0	7.3	3.0			4.0	6.1	3.0	4.3
23/50		8.25	8.5	0.75			6.0	5.5	10.0	5.8
24/50	National Growmore	7.0				7.5	7.0	7.2	7.0	5.7
28/50	Dried Blood (Insoluble)						13.9	13.5		
29/50	Tomato Fertiliser	4	5.4	4	7.0	7.5	6.0	6.3	10.0	10.4
31/50	National Growmore Fertiliser				15.0	21.0	7.0	7.4	7.0	7.3
33/50	Bone Meal						5.0	4.0		
34/50	Superphosphate		18.5							
35/50	No. 7 Granular Fertiliser				15.0	15.2	0	0.1	8.0	7.7
36/50	No. 1 Granular Fertiliser				7.0	7.2	7.0	7.1	10.5	10.2
37/50	Soluble Blood (Solution)						13.0	12.6		
38/50	Muriate of Potash								50.0	51.9
39/50	National No. 3 Fertiliser	11.0	10.5	1.0	12.0	11.7	6.0	7.4		
50/50	Liquid Manure				6.6	6.7	9.0	8.9	4.1	4.3
56/50		5.0	7.7	2.0	8.0	8.5	7.0	7.75	7.0	6.4
57/50							4.48	4.6	0.21	0.2

Where the name of the sample is not given the article was sold under a proprietary name.

G signifies guaranteed composition.

F signifies amount found upon analysis.

FEEDING STUFFS

Table 18

No. F. & F.	Nature of sample	Oil %		Albuminoids %		Fibre %	
		G	F	G	F	G	F
1/50	National Pig Food No. 2 (Fattening)	3.0	3.1	14.0	13.5	7.0	7.4
2/50	Poultry Food No. 1A (Winter Layers)	4.0	4.5	16.0	14.8	7.0	6.4
3/50	Calf Starter Meal	3.0	2.8	30.0	31.3	1.0	1.1
4/50	Chick Starter Mash	4.0	4.0	18.0	18.7	5.5	5.3
7/50	National Poultry Food No. 1 (Laying)	3.0	3.5	16.0	15.9	7.0	6.4
8/50	National Poultry Balance Meal	3.0	3.5	18.0	17.5	8.0	7.0
12/50	Pig Food (Fattening)	3.0	3.03	14.5	15.35	6.25	6.25
13/50	National Poultry Food No. 1 (Pellets)	2.8	3.2	17.2	17.2	6.7	6.9
18/50	Growers Mash with Cod Liver Oil	5.0	4.98	18.0	17.04	6.0	5.8
19/50	Pig Fattening Meal	4.0	6.5	16.0	11.50	8.0	11.3
25/50	Barley Meal				17.05		
26/50	Layers Mash	6.27	6.30	13.13	13.5	9.1	9.0
27/50	National Cattle Food No. 1	3.00	3.5	17.0	17.26	8.0	8.23
30/50	National Cattle Food No. 3	4.0	4.3	21.0	20.5	7.0	6.15
32/50	National Cattle Food No. 4 (Nuts)	3.5	4.5	16.0	16.0	8.0	9.0
40/50	National Pig Food No. 2 (Experimental series)	2.5	(1) 3.15 (2) 3.35 (3) 3.30 (4) 3.30 (5) 3.05	14.5	(1) 15.15 (2) 15.15 (3) 14.85 (4) 14.75 (5) 16.20	9.0	(1) 7.4 (2) 7.35 (3) 6.6 (4) 6.8 (5) 7.0
41/50			(1) 3.8 (2) 3.75		(1) 16.2 (2) 16.9		(1) 5.15 (2) 5.25
42/50			(3) 3.6 (4) 3.75 (5) 3.5		(3) 15.9 (4) 15.3 (5) 15.3		(3) 5.75 (4) 5.5 (5) 5.2
43/50							
44/50							
45/50	National Poultry Food No. 1A. (Experimental series)	3.5		16.0		6.5	
46/50							
47/50							
48/50							
49/50							
51/50	Poultry Tonic Meal	4.0	4.4	18.0	19.8	7.0	6.6
52/50	Sow Weaners Meal	4.0	3.6	16.0	15.9	6.5	6.1
53/50	Pig Fattening Meal	4.0	3.7	13.0	16.6	7.5	6.9
54/50	Poultry Meal	No Statement	0.5		4.0		25.6
55/50	Poultry Yeast			20	27.2		

PART III. WATER AND SEWAGE CHLORINATION

Three hundred and eighty-eight samples were examined, the various sources of supply being as follows:—

Table 19

City water supplied from tap at Canynge Hall	50
City water supplied from Pumping Station, Knowle	17
Charterhouse Hospital and Bristol Mental Hospital	19
West Gloucester supply at Downend and Frenchay Hospitals	24
Portishead supply at Ham Green Hospital	25
Private houses	7
Wells, streams, lakes, etc.	37
Swimming bath waters	120
Seepage	24
Sewage and Trade Effluents	24
Avonmouth Dock	1
Ships in Port	2
Samples from Gloucester County	25
Miscellaneous	13
	<hr/> 388 <hr/>

The City water as supplied by the Barrow Reservoir is sampled in the laboratory and the Sherbourne spring water supplying a portion of the southern part of the city is taken regularly at Knowle.

The mean figures of analysis are appended, together with those of the West Gloucester and Portishead supplies.

Table 20

Source	Bristol Supply		Taps at Downend & Frenchay	Tap at Ham Green Hospital
	Tap at Canynge Hall	Tap at Jubilee Rd. Knowle		
Number of samples	50	17	24	26
	Parts per million			
Total solids	288	345	339	395
Mineral Matter	236	292	291	314
Loss on ignition	52	53	48	81
Chlorine as Chlorides.....	13	12	27	17
Total Oxidised Nitrogen	1.7	2.12	1.02	2.64
Free Ammonia	trace	0.07	nil	nil
Albuminoid Ammonia.....	0.06	0.04	0.04	trace
Total Hardness	223	288	213	313
(by Sodium Versenate)				
Permanent Hardness	51	47	40	69
(by Sodium Versenate)				
pH	7.6	7.4	7.6	7.4

Waters

The summarised data upon the public supplies indicate that a high degree of organic purity has been maintained throughout the year.

A few points are worthy of note. First in compliance with general practice all results are now recorded in parts per million, with of course the exception of the pH value. Titration with sodium versenate has been adopted for hardness determinations and has considerable advantages over methods previously used.

The public supplies gave no indications of plumbo-solvency and no other metallic contamination of any significance was noted during the year.

It is, however, of some interest to record that with greater attention to trace metal determinations it was found that from May to the end of the year a trace of zinc was present in the samples taken from Jubilee Road, Knowle. The amount was of the order of 0.05 parts per million and having regard to the American Public Health Association's recommendation of a maximum of 15 parts per million in a potable water the amount found is without public health significance.

The swimming baths throughout the city have been regularly sampled for chlorination control and the Ministry of Health's recommended minimum of 0.2 parts per million of free chlorine has been well maintained. Any failures were immediately reported to the Baths Superintendent for action. Several baths are being treated by the break-point technique with considerable success and advantage.

The Report of the Chlorination Officer

During 1950 the river treatment experiment was on a very limited scale as the rainfall experienced contributed to the fresh water flow and made treatment unnecessary for long periods.

Following the dry season of 1949 and lack of rain during the early part of 1950 the flow of water in the New Cut had almost ceased by early May, so chlorination was started at a medium rate of dosage. With higher tides and some rainfall, treatment was stopped a fortnight later, but was resumed early in July and continued until mid-September.

With the exception of two short periods when there was a small tidal flow, dosage was at a low rate, and the total amount of liquid chlorine used on sewage and river treatment was approximately 67 tons.

This amount included chlorine used in direct treatment of the river by the multiple unit chlorinator which had been assembled. This shows promise of being a very effective instrument in the control of smell nuisance, as it is capable of applying 120lbs. of chlorine per hour when supplied with suitable water pressure.

There was little demand for bleach treatment of sewers to delay septicity and only two series of treatment were run early in the season.

This type of treatment, however, was of great service on several occasions for the dispersal of sewer gas in order to enable men to work in safety underground and a satisfactory degree of control was established with quite crude apparatus.

Five new chlorinators were purchased during the year, and the question of re-siting some of the plant is under consideration.

Subsidiary Work

Control of the softening plant at Ham Green Hospital has been continued and the chlorinator attached to that plant has been maintained.

Emergency chlorination at Frenchay and Charterhouse Hospitals has been carried out when the water supply was unsatisfactory and two visits were made to Periton Mead School at Minehead (at the request of the Education Committee) to service the chlorinator there.

Treatment of the Blaise Castle paddling pool has been carried out during the summer months, and a smell nuisance from the river Hen was mitigated by bleach treatment.

In addition, treatment of the sewage of a private mental hospital was continued until August, when it became unnecessary as a new percolating filter was put into operation.

PART IV. RAG FLOCK ACT

The results on the fifteen samples examined are tabulated.

Table 21

No. of sample	Parts of chlorine per 100,000 parts of Flock	Comment
1	10	Satisfactory.
2	9	Satisfactory.
3	23	Satisfactory.
4	10	Satisfactory. Wool and cotton fibres noted.
5	13	Satisfactory. Wool and cotton fibres noted.
6	15	Satisfactory. Wool and cotton fibres noted.
7	23	Satisfactory. Hemp with some horsehair
8	8	Satisfactory. Wool and cotton.
9	50	20 parts in excess of permitted maximum, wool, cotton and other vegetable fibres.
10	55	25 parts in excess of permitted maximum, wool, cotton and other vegetable fibres.
11	22	Satisfactory. Wool and cotton fibres.
12	16	Satisfactory. Wool and cotton fibres.
13	43	13 parts in excess of permitted maximum. Wool, cotton and other vegetable fibres
14	10	Satisfactory. Wool, cotton and other vegetable fibres.
Miscellaneous unsealed sample	16	Satisfactory. Wool and cotton fibre.

The Rag Flock Acts 1911 and 1928 and the Rag Flock Regulations 1912 require rag flock to contain not more than thirty parts of chlorine per 100,000. It will be noted from the table that three samples failed to comply.

A washing test laid down in The British Standards Institution Specification No. 1425 may provide a better means of assessing cleanliness of flock, but as yet this test is not incorporated in Rag Flock legislation.

PART V. MISCELLANEOUS ANALYSES

Table 22

1. Infestation	15
2. General	254
3. Biochemical	24
4. Toxicological	20
5. District Inspectors	47
6. Ministry of Food	3
7. Ministry of Fuel and Power	24
8. Special	
Atmospheric Pollution	24
Teeth	9
9. Regional Hospitals	41
<i>Corporation Departments</i>	
10. Transport and Cleansing	6
11. Housing	1
12. Central Purchasing	12
13. Port of Bristol	6
14. Port Health	163
15. Rat Repression	1
16. City Engineer	200
17. City Architect	10
	<hr/>
	860

1. Infestation

Ten articles of food and five specimens of insects were submitted. The insects included the saw-toothed grain beetle, the eyed hawk moth, larvae of the cocoa moth and mosquitoes. The foodstuffs found to be infested were semolina (Ephestia and Tyroglyphid mite), pudding mixture (Ephestia), ice cake (the lesser grain borer), oats (webbing and pupa of Ephestia).

2. General

Some 254 samples are classified under this heading. These cover a wide and ever-increasing range of commodities and it is only possible to make a brief selection of the more important items.

A sweetened fat was found to contain the 40 per cent. of fat alleged to be present.

Meat and vegetable stew was condemned on account of excessive tin (5 grains per lb.).

Ice cream powder contained sugar, lactose, starch, glucose and soya flour. There was no evidence of teaseed oil as alleged.

A portion of bacon was condemned because of excessive fishy odour possibly arising from storage near fish (kippers) or more probably due to oxidative changes in the fat.

A number of calcium sodium lactate tablets were found to contain little or no sodium lactate and relabelling of packets was advised.

Dried potato crisps were found to reconstitute satisfactorily despite some three years of storage.

A sample of marmalade was condemned by virtue of the presence of zinc (5.5 grains per lb.). This was a private complaint and arose because the marmalade had been prepared in a galvanised vessel. It cannot be too strongly emphasised that such vessels should not be used in contact with products which contain appreciable quantities of organic acids such as citric, tartaric and malic acid.

Two samples of butter were found to have a distinct cheese-like odour and this appeared to be due to traces of copper. It was not possible to trace the source of the contamination.

Several samples of bread and cakes were submitted in the course of the year for examination for rodent excreta. This was confirmed in a number of cases. In others the trouble seems to have arisen in mistaking dirty or charred portions of dough for rodent excreta.

Specimens of plasticine alleged to cause dermatitis in children were free from deleterious substances and it would seem that some persons have an idiosyncrasy for this product.

The presence of metal filings in a few sausages caused the rejection of a complete batch. The filings were apparently derived from a faulty sausage machine.

A few samples of dried milk powder were examined at various times because of alleged brown specks. The specks proved to be caramelised milk powder formed by overheating during processing of the powder.

Canned potatoes gave rise to complaints and the trouble was due to "flat sours", a not uncommon fault with this type of product.

A sample of cheese was found to contain 0.13 per cent. of phenolic bodies. The actual contaminant was dinitro cresol. The stock was destroyed as it was impossible to remove the contaminant.

A portion of bread was found to contain a piece of handkerchief including the initial embroidered in the corner. No blood or pus was found which might have suggested use of the handkerchief as a bandage.

Three samples of currants were condemned because of the presence of maggots, the saw-toothed grain beetle and the foreign grain beetle.

Several samples of canned cherries in syrup (ex Italy) were condemned because of unpleasant odour of sulphuretted hydrogen. It was suggested that the fruit had been excessively sulphited and the sulphur dioxide had attacked the tin plate with production of sulphuretted hydrogen.

A portion of bread was found to contain a piece of yellow label derived from the flour sack. Action was taken and a conviction secured (£5 fine and £5 costs).

A sample of butter was found to be contaminated with the fungus of *Cladosporium* (Black spot). This fungus can exist at cold storage temperatures.

Some luncheon meat (ex Denmark) was condemned because of excessive tin. 5.6 grains per lb. were present in end portions of the meat.

A portion of cake containing a piece of bandage resulted in a fine of £5.

A foreign body found in a school meal proved to be a crystal of copper sulphate. It is thought possible that some mischievous child had secured the crystal from the school laboratory. Such pranks may well have serious consequences.

Samples of foil-wrapped cheese were condemned because of the presence of excessive amounts of tin, 12.4 grains per lb. in surface layers and 2.8 grains per lb. in inner portions.

Some crystals alleged to be present in a packet of tea proved to be common salt.

Four samples of brine pickle were found to be free from undue amounts of zinc, but were so low in salt as to have little preserving action. Furthermore all samples showed signs of putrefaction and received adverse bacteriological reports.

To conclude this section we had the incident of the Polish geese. A large number of fates were examined and practically all derived from Polish geese were condemned because of rancidity. The problem was carried over into 1951 when a further 90 birds were condemned.

3. Biochemical

Twenty-three specimens were submitted under this heading and included blood, urine and teeth. The urines were examined for lead, N-methyl nicotinamide hydrochloride, and mercury. The bloods were examined for lead, copper and pyruvic acid. The teeth were examined for lead. This work was required by various hospitals.

4. Toxicological

This section always provides much of great interest and some twenty specimens relating to thirteen cases were examined.

M.33	Urine	-	-	-	No evidence of arsenic.
M.67	Urine	-	-	-	Barbiturate equivalent to 10 grains of phenobarbitone in a 12-hour specimen of urine.
M.72	Medicine	-	-	-	Correctly dispensed in relation to its strychnine content.
M.80	Stomach washout	-	-	-	The equivalent of half grain of aspirin in 70 ml. of fluid.
M.133	Stomach contents	-	-	-	No evidence of barbiturates.
M.144	Vomit	-	-	-	No metallic, alkaloidal or other poisons. This patient was later operated upon for intestinal obstruction!
M.215	Urine	-	-	-	Aspirin equivalent to 80 grains per 24 hour specimen.
M.216	<div style="display: inline-block; vertical-align: middle; font-size: 3em; line-height: 1;"> <div style="display: inline-block; vertical-align: middle;"> <div style="display: inline-block; vertical-align: middle;">Stomach washout</div> <div style="display: inline-block; vertical-align: middle;">Urine (post mortem)</div> <div style="display: inline-block; vertical-align: middle;">Stomach contents</div> <div style="display: inline-block; vertical-align: middle;">Liver</div> <div style="display: inline-block; vertical-align: middle;">Brain</div> </div> </div>	-	-	-	No evidence of barbiturate or salicylates.
M.218		-	-	-	
M.219		-	-	-	
M.220		-	-	-	
M.221		-	-	-	
M.374	Urine	-	-	-	No arsenic detected.
M.548	Liver	-	-	-	Lead 2.4 parts per million.
					Quinine equiv. to 15 parts per million.
M.549	Kidney	-	-	-	Lead 2.0 parts per million.
M.550	Blood	-	-	-	Lead 3.0 parts per million.

M.548-M.550 related to a case of abortion with subsequent death. Lead was suspected as the abortifacient but quinine seemed more likely although the amount found seems hardly sufficient to have caused death.

M.674	Urine	-	-	-	Traces of an unidentified barbiturate in both specimens.
M.675	Vomit	-	-	-	
M.678	Stomach contents	-	-	-	The equivalent of 2½ mgms. of aldehyde calculated as metaldehyde.

The child concerned in this case swallowed metaldehyde (slug killer) with fatal results.

M.738	Tea	-	-	-	No arsenic detected. No alkaloids other than caffeine.
-------	-----	---	---	---	--

5. District Sanitary Inspectors

These samples, 47 in number, were submitted by the District Inspectors as distinct from the Food and Drug Inspectors. The following are of particular interest:

Two samples of mincemeat were condemned as unfit because the containers were badly strained and damaged.

Samples of sweet pickle were found to be mouldy and of repulsive odour. Two possible reasons for the faults observed would appear to be insufficient

acetic acid to ensure satisfactory keeping qualities and lack of care in capping after preparation.

Two beetles were identified as adult beetle with larva of *Attagenus pello*, the Dermestidae family.

A deposit from a drain was found to be normal in character for domestic waste.

Several samples of solid pack apples (ex France) were found to contain significant although not excessive amounts of tin. No gas was found but general condition warranted early disposal.

Some insects proved to be either cat or dog fleas.

Cherries in syrup (ex Italy) were of repulsive odour. It was suggested that the cherries had been excessively sulphited before canning and the sulphur dioxide had been reduced to sulphuretted hydrogen. Iridescent particles of iron sulphide were also noted. The fruit was quite unfit for human consumption.

Currants were found infested with the Mediterranean flour moth and some flour contained larvae and adult forms of *Gnathocerus cornutus*.

Some processed cheese was condemned because of excessive mould.

An alleged sample of maple syrup was found to contain not more than 30 per cent. maple syrup and at least 70 per cent. commercial starch glucose. Only $9\frac{1}{2}$ fluid ounces were present in the jar and not 10 fluid ounces as stated on the label. Exception was taken to the labelling upon other counts.

Five cans of sliced oranges in syrup, from French Morocco, were found to contain between 1.0 and 1.4 grains of tin per lb. The cans had been coated with an aluminium paint presumably to conceal appearances of old stock. The fruit was badly sliced and had much attached pith. The fruit was intended for hospital use and was declared unfit for that purpose.

6. Ministry of Food

Only three samples were received from the Ministry as compared with 40 in 1949.

M.323 Cream	contained 61.5 per cent. of butter fat and was therefore cream within the meaning of Statutory Instrument 1950, No. 876.
-------------	--

M.396 Rock	} These two samples contained commercial glucose and no added sucrose. Both were of peppermint flavour. M.396 contained a piece of wood. Both samples were confectionery within the meaning of Statutory Instrument 1950, No. 1430.
M.450 Rock	

7. Ministry of Fuel and Power

Twenty-four samples of motor spirit were examined early in the year and this work came to an abrupt halt at Whitsun when the Motor Spirit Regulations 1948 were revoked.

Of the twenty-four samples, submitted by Ministry Officials and the Police, 21 were found to contain diphenylamine or its homologues. One sample had been treated to remove colour but the tell-tale diphenylamine remained. Yet another sample contained 10 per cent. of lubricating oil in a commercial spirit.

Several prosecutions were pending when the revocation was made and these offenders were consequently fortunate for all outstanding hearings were cancelled. With these went two interesting appeals upon the question of the identification of diphenylamine which had hitherto been a stumbling block.

Should this unpopular, but necessary, legislation ever return there is little doubt that chromatographic methods can be of great help in distinguish-

ing diphenylamine from its homologues although, of course, the Ministry dealt very promptly with the difficulties by an amending regulation which included diphenylamine and its homologues.

8. Special Examinations

(a) Atmospheric Pollution.

Twenty-four samples were examined for zinc and fluorine and will be considered under the section dealing with the subject of Atmospheric Pollution.

(b) Nine specimens of teeth were submitted and with the spectrophotometric section in operation were examined not only for lead but for other possible elements. By this means lead was detected in quantities from 2–20 parts per million. Minute amounts of copper were also found but the elements tin, nickel, cobalt, zinc, chromium and manganese were not detected.

9. Regional Hospitals

Forty-one samples were submitted by various hospitals, including Winford, Stapleton, Frenchay, Bristol Royal Infirmary and Southmead and by the Regional Blood Transfusion Centre.

The latter establishment submitted a considerable number of samples of distilled water, back flush water, anticoagulant solution, glucose citrate solution and saline in efforts to control difficulties arising from the preparation of distilled water in certain types of still. Lead was detected in certain samples and later, traces of copper.

Other samples under this section included:—

M.44	Butter	-	-	Reported as off flavour due to traces of copper.
M.60	Urine	-	-	Contained a normal amount of nicotinic acid.
M.313	Canned Meat and Potatoes			Complaint of abnormal taste was not confirmed.
M.595	Blood	-	-	Lead content slightly above the normal maximum.
M.710	Lemon Fruit Squash			Complied with the Soft Drinks (Amendment) Order 1950. The presence of copper to the extent of 1 part per million requires some explanation.

10. Transport and Cleansing Department

The following samples were examined:—

M.601	Antifreeze	(a)	contained at least 97 per cent. of ethylene
M.602	"	(b)	glycol.
M.676	Pig Food	-	These samples were submitted from the Animal Food Department at the Eastville destructor and were satisfactory in respect of moisture, ash and protein.
M.677	"	"	
M.679	"	"	
M.680	"	"	

11. Corporation Housing Department

A hand-towel, submitted as a result of a complaint, was found to be stained in consequence of the development of "iron" mould.

12. Central Purchasing Department

Twelve samples were submitted primarily for check against specifications. The following comments were made:

M.76	Raspberry Jelly Crystals			Satisfactory in composition and price
M.77	Lemon	„	„	having regard to the gelatin and citric acid content.
M.210	Aluminium Paint	-		In accordance with specification supplied.
M.289	Liquid Soap No. 1	-		Both complied with B.S.S. No. 1954 of
M.290	„ „ No. 4	-		1949 with No. 1 preferred.
M.362	Dark grey Graphite Paint			In accordance with specification
M.363	Aluminium Paint	-		In accordance with specification supplied.
M.519	Soap Powder	-	-	Not in accordance with specification. Deficient in fatty acids.
M.524	Liquid Soap	-	-	No specification provided but not of the quality of M.289 and M.290 above.
M.551	Vinegar	-	-	Genuine malt vinegar containing 5 per cent. of acetic acid.
M.598	Red Lead Paint	-	-	Not in full agreement with B.S.S. 1011, Type II, being slightly deficient in Red Lead and above maximum limit for volatile matter.
M.768	Liquid Soap	-	-	No specification provided but superior in quality to M.524 and in accordance with B.S.S. 1954 of 1949.

13. Port of Bristol Authority

Six samples of paint were examined and all complied with specification.

One sample of a green paint complied with B.S.S. 929 F5 and the colour was due to an aluminium lake and not to chromium as was first thought.

14. Port Health

There was a marked increase in the samples received from this department, 163 as against 37 in 1949.

The following samples were satisfactory:—

Beef and Pork Loaf ex Holland.
 Canned Peas ex New Zealand.
 Canned Peeled Tomatoes ex Italy.
 Luncheon Meat ex Holland.
 Canned Grapes ex S. Africa.
 Cherries in syrup ex Italy.
 Luncheon Meat ex France.
 Pineapple Pulp ex Australia.
 Pears ex Italy.
 Canned Apricots ex Spain.
 Citrus Peel ex S. Africa.
 Pilchards ex S. Africa.
 Red Ore (iron oxide) ex Persian Gulf.
 Canned Blackberries ex Holland.
 Sardines ex Portugal.
 Sardines ex French Morocco.

The above list illustrates the cosmopolitan nature of the work of the Laboratory.

Adverse comment was necessary upon certain commodities. Cut candied peel was found to be decidedly mouldy. Ground coffee from S. Africa had deteriorated and contained 20 per cent. of undeclared chicory.

A portion of breast of mutton contained embedded seeds of an unidentified species of grass.

A few samples of canned peeled tomatoes from Italy required early disposal by virtue of appreciable amounts of tin. Another batch gave evidence of gas production and bacteriological examination indicated the presence of *Clostridium Welchii*.

As in 1949 pears from Italy contained small amounts of arsenic—0.001–0.012 grains per lb. in the whole fruit. The amount of copper was insignificant. Careful wiping of all fruit was recommended and check samples indicated that the treatment was carried out effectively.

An insect, suspected as a Colorado beetle, proved to be the larval form of the ladybird.

Canned salmon was reported unfit because of excessive amounts of tin.

Finally late in the year a large number of samples of sardines were submitted. Those of Portuguese origin were in the main satisfactory although two brands showed lead, equivalent to 5.2 and 7.6 parts per million, whilst certain brands of French Moroccan manufacture were unsatisfactory with lead contents of 8.0 to 8.8 parts per million.

15. Rat Repression Officer

A fowl was submitted and it was alleged that death was due to zinc phosphide bait. No evidence of this compound could be obtained.

16. City Engineer's Department

One hundred and ninety-eight samples of sub-soil and sub-soil waters derived from proposed housing sites were submitted.

It is well known that mineral sulphates have a deleterious effect on concrete and the information was required regarding the sulphate concentration of the soil and ground water through which proposed concrete sewers, etc., would be laid. In a paper submitted to the Council of Public Works, Roads and Transport Congress in 1937, F. C. Ball, of the Borough Engineer's Department, Southall, expressed the opinion that a concentration of sulphuric anhydride (SO_3) exceeding 30–40 parts per 100,000 in a sub-soil water, or 0.25 per cent. in the subsoil, was liable to have a deleterious effect on Portland cement concrete. In such cases it would be necessary to apply precautions either to avoid that particular strata if possible or to protect the cement structure.

These figures were taken as limiting values and 115 samples were satisfactory, 32 were doubtful and 61 were unsatisfactory on account of excessive amounts of sulphate.

It is apparent that considerable care and thought will be necessary in the areas surveyed and it may well be that projects in view may prove more costly in resistant types of cements.

Two final samples for this department were:—

- | | | |
|---|---|--|
| M.607 Terrazzo paving | - | Only limestone proved to be present as demonstrated by the polarising microscope. Our thanks are due to the Geological Department of the University of Bristol for assistance with this problem. |
| M.609 Deposit from Kings-weston Culvert | - | Mainly sand, alumina, iron oxide and water. |

17. City Architect's Department

Four samples of sand complied with B.S. Specification.

A sand-lime-cement mixture was examined and various ratios of cement/sand, etc., were calculated. The mixture appeared satisfactory for the intended purpose.

Two samples of paint were unsatisfactory. A white lead undercoat contained excessive volatile matter and was therefore not in accordance with B.S.S. 929 U.1. A gloss finish paint was deficient in pigment and contained excessive oil and volatile matter and failed to comply with B.S.S. 929 F.1.

Two samples of black mortar were examined fully and appeared to be satisfactory. No indication was given as to any particular complaint when the samples were submitted.

PART VI. POISONS AND PHARMACY ACT 1933

The four samples submitted were as follows:—

- | | | | |
|----------|----------------|---|---|
| PandP. 1 | Weedkiller | - | Alleged to contain 55.58 per cent. v/v of phenols. Reported as containing 51.7 per cent. v/v of cresols. Regarded as satisfactory and a Part II poison within the 1933 Act and the Poison Rules 1949. |
| PandP. 2 | Lysol | - | Contained 49 per cent. v/v of cresol and therefore complies with the cresol content of Lysol B.P. (limits 47–53 per cent. v/v). |
| PandP. 3 | Caustic Paste | - | Contained 9.4 per cent. of sodium hydroxide. The sample complied with the 1933 Act inasmuch as it bore a caution in respect of its caustic properties. Since it contained less than 12 per cent. sodium hydroxide the paste is exempt from the application of the Acts and Rules by rule 10 and is deemed non-poisonous for statutory purposes. |
| PandP. 4 | Carpet Cleaner | - | A solution of sulphonated fatty alcohol soap and contained a good proportion of fatty alcohols. Free alkalinity as sodium carbonate low. Sterilising agents such as hypochlorites and chloramine T were absent. Considered suitable for the purpose intended. |

Two important Statutory Instruments were made in July. These were The Poisons List Order 1950 and The Poisons Rules 1950 both to operate as from 1st September, 1950.

The Poisons List includes two Schedules. The first gives amendments and variations in Part I of the Poisons List whilst the Second Schedule includes the Part I and Part II Poisons.

The general purport of the Poisons Rules 1950 is as follows:—Under Rules 7 and 12 of the principal Rules the signed order or prescription which is required in the case of certain sales of poisons must state the total amount to be supplied; under Rule 1 of these Rules, where the substance is sold in

ampoules, there will now be the alternative of stating either that amount or the total amount intended for administration or injection. Rules 3 to 6 of these Rules impose appropriate requirements and restrictions relating to the sales of certain substances now added to the Poisons List by the Poisons List Order 1950.

PART VII. ATMOSPHERIC POLLUTION

The table summarises the recordings made under this section.

Table 23

Deposit gauges	.....	.....	.....	.....	72
Lead peroxide for sulphur	.....	.....	.....	.....	132
Continuous smoke and sulphur dioxide estimations	.....	.....	.....	.....	280
					<hr/> 484 <hr/>

The City

The four city stations were fully operative during the year and the overall total solid matter will be noted in diagram herewith.

The pollution is measured by collection and analysis for the soluble, insoluble and tarry matters, calcium chloride and sulphate, which are deposited from the air in a deposit gauge which consists of a large glass bowl of known area. The bowl drains into a glass reservoir of some 10 litres capacity—such a volume representing approximately 5 inches of rainfall. Each reservoir is replaced by a clean one, on or about the first of the month. As a precaution particularly after heavy rainfall the sites are inspected about mid-month.

The results are expressed in tons per square mile, thus for the year :

Table 24

	<u>Total Deposit</u>	<u>Tar</u>	<u>SO₃ range</u>
Shaftesbury Crusade, St. Philip's	277	2	1.08—4.46
Waterworks Office, Marsh Street.....	254	2.8	0.03—3.18
Zoological Gardens	143	5	0.03—1.75 .
Blaise Castle	103	1	0.03—1.50

The lead peroxide figures as SO₃ in milligrams of SO₃ per 100 sq. cm. per day are added to the above table for comparison.

The figures show little significant change over previous years although it will be noted that the Zoological gauge gave 5 tons of tarry matter in 1950. Of this amount 3.6 tons was obtained in the month of July when extensive work upon asphalt paths was in progress in the gardens—a remarkable instance of local pollution !

The sulphur pollution is measured by exposing cylinders of lead peroxide at the various sites for a period of one month. The peroxide is highly reactive to sulphur gases and in the process changes to lead sulphate. After the exposure period the cylinders are returned to the laboratory and the degree of conversion to sulphate determined. Results are expressed in milligrams of sulphur trioxide SO₃, per 100 sq. cm. per day.

Continuous smoke and sulphur dioxide recordings

Two hundred and eighty days of recording were made. The primary object of this work is to provide smoke filters for submission to the Medical Research Council, who are investigating smoke deposits from various cities in relation to the apparent increase of cancer of the lungs which has taken place in England and Wales during the last twenty years or so.

Examination is made for arsenic, coal tar and its derivatives and radio-activity. No definite evidence of connection with lung cancer has so far been established and work is still in progress.

The apparatus in the laboratory requires attention every 24 hours and is designed so that the weight of smoke in milligrams per 100 cubic feet of air together with the amount of sulphur dioxide in the air can be measured.

The Avonmouth Survey

The three sites in this area include the Docks, T Farm and Green Splot farm. All are equipped with lead peroxide cylinders and the first two with deposit gauges. The normal routine analysis of these gauges is not carried out since they were established with the primary object of assessing the degree of pollution by Zinc and Fluorine. It is realised that examination of the deposit gauges is perhaps not the best method of determining the degree of pollution by those elements and there is some indication that the proximity of a conveyor belt from the docks may cause localised pollution by dust. Further domestic fires will account for traces of zinc and fluorine but there appears to be little doubt that the two sites under investigation do indicate more zinc and fluorine than can be ascribed to purely domestic sources. Undoubtedly more extended survey is required, but pressure of laboratory work in other fields precludes this at the present time. The range of figures given by the gauges is as follows :

Table 25

Avonmouth Docks

Zinc 0.70 tons per sq. mile in February
to 7.8 " " " " " November

Fluorine 0.14 " " " " " April
to 0.35 " " " " " January

T Farm

Zinc 0.21 " " " " " August
to 1.03 " " " " " January

Fluorine 0.01 " " " " " June
to 0.06 " " " " " January

It is emphasised that the figures indicate total zinc and fluorine in suspension and solution in the rain water collected and that no attempt was made to determine the type of compounds entrained.

The Portishead Survey

Four stations were in operation in this area throughout the year. All were equipped with apparatus for sulphur dioxide determinations and two with deposit gauges. The latter sited at the Portishead Docks and Meadow Farm are intended to present the best and worst expected type of pollution for the area and this is well illustrated in the results obtained.

PART VIII. SPECTROPHOTOMETRY

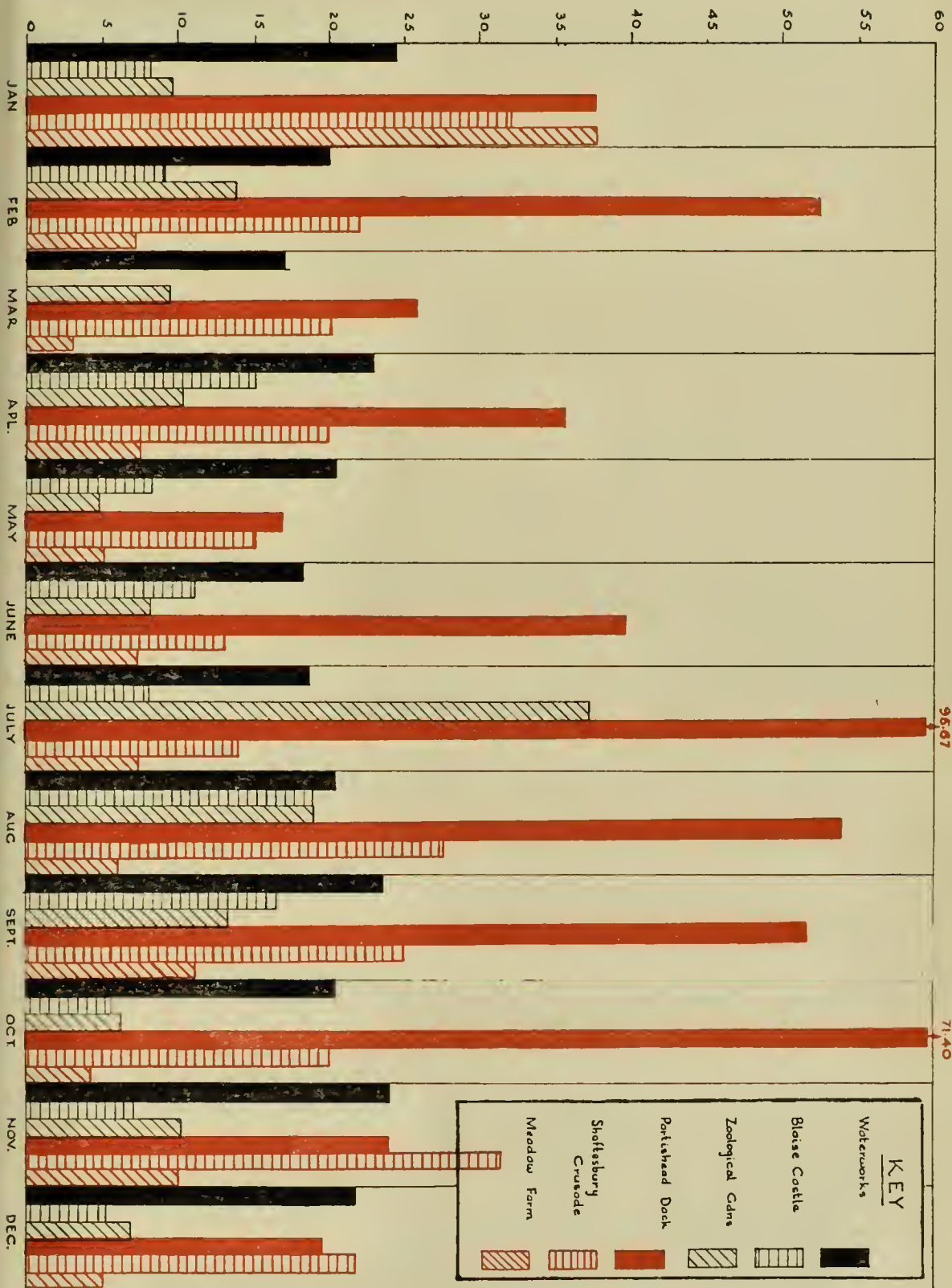
The senior spectroscopist took up his duties on the first of September whilst the assistant, who arrived in August, had made good use of the time in becoming familiar with the Laboratory routine and the type of problems in which this new section would be of help.

In the early stages adjustment and calibration of the new apparatus involved a considerable amount of work. Nevertheless some 110 special examinations of materials were made and much useful knowledge gained. Valuable

ATMOSPHERIC POLLUTION. 1950.

TOTAL SOLID MATTER (SUSPENDED AND DISSOLVED)

TONS PER SQUARE MILE



help was given in examinations for trace metals and in a survey of lead and tin in samples of sardines from Portugal and French Morocco the method of treatment showed a great saving of time over the much lengthier methods of chemical examination.

Several University Departments have made enquiries about the use of the apparatus and certain investigations are being carried out. This type of contact is most useful and was certainly a suggested development of the section as first planned.

Table 26

	Total deposit Tons per sq. mile	Tar
<i>Portishead Dock</i>	530.3	13.0 (11 months)
Monthly average	44.2	1.08
<i>Meadow Farm</i>	116.9	2.1
Monthly average	9.75	0.17

Table 27

	Rainfall in inches		Total Deposit Tons per sq. mile		Tar	
	1950	1949	1950	1949	1950	1949
Portishead Dock	35.7	26.0	530.3	538.8	13.0	3.9
Meadow Farm	36.1	23.9	116.9	73.8	2.1	1.9

Table 27 gives a comparison of the results for 1949 and 1950. The rainfall shows a 50 per cent. increase in 1950 and this might be expected to lead to significant increases in total deposit and tar. In the Dock area, however, the total deposit has remained at the same level although there is an appreciable rise in tarry matters. It could therefore be argued that the new stack has brought about some improvement in the localised grit nuisance whilst heavier rainfall in 1950 helped to increase the tar figure. It is understood that whilst the new stack was operating as from 1st July 1949 a number of smaller stacks continued in use well into 1950, so that full appreciation of the effect of the new stack may be a little premature.

The position at Meadow Farm is much as would be expected having regard to the heavier rainfall. The total deposit shows a 50 per cent. increase over 1949 figures whilst the tarry matter is little changed.

It is considered that further useful information might be obtained from a further gauge in Portishead, and this new gauge was set up in South Road on 3rd January, 1951.

No attention has hitherto been paid to the possible presence of phosphorus compounds in the area, but this problem may have to be considered before the proposed Phosphorus works comes into operation.

PART IX. OTHER ACTIVITIES

Under this section it is proposed to outline other functions of the Public Analyst besides matters requiring chemical analysis.

Lectures in the Chemistry of Hygiene were given to doctors studying for the Diploma in Public Health and to prospective Sanitary Inspectors. Further lectures of a general character dealing with the work of the department were given to interested clubs.

Your Analyst is a member of the Technical Advisory Committee which assists the Central Purchasing Committee upon Stores, a member of the

Regional Smoke Abatement and of the Standing Conference on Atmospheric Pollution.

Several interesting topics, involving advice rather than examination, were discussed during the year and a selection of these indicates the extensive nature of the work of the department.

Information was required early in the year upon the treatment to be applied to a child alleged to have swallowed a portion of indelible pencil.

A private enquiry was made upon the closure of the St. Vincent spring; the Port of Bristol Authority requested information upon pearl ash; the City Architect was given advice upon the dangers arising from the use of strong sulphuric acid in certain work at the Central Health Clinic.

In April the Port Health Authority was informed that certain quantities of lactose held at the docks were unfit, because of excessive mould growth, and it was learned subsequently that the material was intended for use in the manufacture of penicillin. The lactose had to some extent anticipated its final fate!

An American product known as 1080 was found to be mainly sodium fluoro-acetate. It is apparently used as a 25 per cent. solution for rat destruction. Rats appear to like the compound and it is certainly highly toxic.

At the request of the Medical Officer of Health a visit was made to Widnes and Oldbury in company with the Chief Sanitary Inspector, to inspect the works of a firm producing elementary phosphorus.

The visit, which occupied four days, was made primarily with the object of studying the process with particular reference to the dust and fume nuisance which could be expected if such a factory were installed near Bristol, and the effect which such nuisance would have on the health of the inhabitants.

The conclusions arrived at were that in the older of the two works, both dust and fume nuisance were present to a marked degree, while in the newer works the dust nuisance had almost been eliminated by better methods of handling the phosphate rock—one of the raw materials for the process.

Having regard to the fact that the proposed factory would be most modern in conception, incorporating the latest improvements in handling their raw material, and in the electro thermal process for the production of the element, it was concluded that little anxiety need be felt regarding danger to health. A further factor which influenced the conclusions was that in the area where the factory would be installed the prevailing wind was in a direction which would take any fumes away from the residential area, and dissolved in the water vapour in the air they would be almost innocuous.

The problem of the disposal of radioactive waters from a hospital was further considered in August. Representatives of the City Engineer's Department, of the Hospital Authorities, and of the City Analyst's Department considered the problem and agreement was reached upon action to be taken.

In December the Port of Bristol Authority requested information concerning the classification of cadmium carbonate with respect to possible customs duty.

Finally reference should be made to visitors to the laboratory and we were pleased to welcome Mr. C. J. Regan, Chemist-in-Chief, London County Council; Dr. A. L. Winner of the Ministry of Health, Dr. Li Keh-Hung of the Peking Union Medical College, and Mr. M. K. Beteik and Mr. A. Hassan, both from the Sudan.

IV

PORT HEALTH

PORT HEALTH SERVICES

Medical Inspection and Sanitary Circumstances

By Dr. D. T. Richards, Chief Assistant Port Medical Officer

This report is prepared on the lines indicated in Memorandum 302/S.A. issued by the Ministry of Health to Port Health Authorities. Many of the arrangements described hereunder have remained substantially the same during the past years but have again been included in this year's report in order to provide a more comprehensive picture of the measures of hygiene in operation at the port.

I. Vessels Entering the Port during the Year.

A total of 1,118 ships entered the Port of Bristol either direct from foreign or via United Kingdom ports during the year. The successive annual increases, which have provided an important feature of the port's activity during the last five years, have thus been maintained.

Year	Avonmouth & Portishead	Bristol City	Total
1946	428	137	565
1947	492	216	708
1948	624	272	896
1949	697	227	924
1950	744	374	1,118

This annual increase is illustrated in the above table which shows also that the 1949 figure for such arrivals, and referred to in that year's report as a peace time record, is exceeded by 194. This is largely due to the increase of shipping traffic in the City Docks—where the Continental trade is approaching its pre-war regularity—and to the number of vessels entering the Avonmouth Docks for the purpose of loading outward cargoes.

The increased volume of shipping has naturally led to a rise in the number of persons arriving in the port, and we find that a total of 42,661 passengers and crews were dealt with by the Medical Officer in accordance with the Regulations compared with 38,601 in the previous year. Of these persons, 610 were found to be in need of medical attention. The following table details their disposal.

V.D. Clinic	Out-Patient Hospital	In-Patient Hospital	Private Doctors	Total
485	18	40	67	610

The system of daily visits by the port health inspectors to vessels which arrive from or via ports deemed to be infected (and included in the list of ports published in the Ministry of Health's weekly bulletin) has been continued. A total of 214 such ships entered the port during the year: 161 at Avonmouth and 53 at the City Docks. This additional routine is essential if the rapid detection and isolation of potential sources of epidemic infection is to be assured, and its importance cannot be over emphasized.

1. Amount of Shipping Entering the Port during 1950.
(Avonmouth, Portishead and Bristol).

TABLE A.

	Number *	Tonnage *	Number inspected		Number reported to be defective	Number of vessels on which defects were remedied	Number of vessels on which defects were found and reported to Ministry of Transport Surveyors	Number of vessels reported as having, or having had, during the voyage, infectious disease on board†
			By the Medical Officer of Health	By the Sanitary Inspector				
<i>Foreign-Going—</i>								
Steamers	...		647	652	216	197	3	12
Motor	...	2,955,899	447	466	38	37	—	4
Sailing	...		—	—	—	—	—	—
Fishing	...		—	—	—	—	—	—
Total Foreign	1,055	2,955,899	1,094	1,118	254	234	3	16
<i>Coastwise—</i>								
Steamers	...		—	576	40	35	—	—
Motor	...	1,282,174	1	76	7	6	—	—
Sailing	...		—	—	—	—	—	—
Fishing	...		—	—	—	—	—	—
Total Coastwise	7,877	1,282,174	1	652	47	41	—	—
Total Foreign and Coastwise	8,932	4,238,073	1,095	1,770	301	275	3	16

*Figures supplied by courtesy of the Port of Bristol Authority. (Discrepancy between number of vessels shown as arriving and number shown as inspected in foreign-going section arises from differing classification of foreign-going and home-trade coastwise vessels as applied by the Port of Bristol Authority and the Bristol Port Health Authority).

†Excluding vessels having venereal disease on board.

II. Character of Trade of Port.

TABLE B.

(a) Passenger Traffic during the year 1950.

(i) Seaport.

No. of Passengers					1st Class	2nd Class, 3rd Class, Transmigrants	Totals
<i>Inwards—</i>							
	Aliens	...	...	...	143	—	143
	British	...	...	...	2,546	—	2,546
<i>Outwards—</i>							
	Aliens	...	...	...	148	—	148
	British	...	...	...	1,874	—	1,874

(ii) Airport

No. of Passengers					1st Class	2nd Class, 3rd Class, Transmigrants	Totals
<i>Inwards—</i>							
	Aliens	...	...	...	81	—	81
	British	...	...	...	69	—	69
<i>Outwards—</i>							
	Aliens	...	...	...	92	—	92
	British	...	...	...	100	—	100

(b) Cargo Traffic.

Principal Imports, 1950

COMMODITIES								TONS
Grain	...	...	...	...	...	...	...	639,534
Oilseeds and nuts	...	...	...	...	...	...	...	32,014
Feeding stuffs	...	...	...	...	...	...	...	128,328
Cereal products	...	...	...	...	...	...	...	35,052
Cocoa and chocolate	...	...	...	...	...	...	...	33,548
Eggs—Fresh and dried	...	...	...	...	...	...	...	2,269
Fruit:—								
Bananas (2,852,290 bunches)	...	...	...	...	...	...	...	33,222
Oranges and Lemons (260,666 cases)	...	...	...	...	...	...	...	13,652
Other green fruit	...	...	...	...	...	...	...	10,499
Canned	...	...	...	...	...	...	...	4,180
Dried	...	...	...	...	...	...	...	20,901
Milk—Dried and Evaporated	...	...	...	...	...	...	...	3,619
Metals and Ores:—								
Aluminium	...	...	...	...	...	...	...	45,228
Brass	...	...	...	...	...	...	...	78
Copper	...	...	...	...	...	...	...	12,160
Iron	...	...	...	...	...	...	...	2,962
Lead	...	...	...	...	...	...	...	2,301
Spelter	...	...	...	...	...	...	...	8,505
Zinc Concentrates	...	...	...	...	...	...	...	128,323
Paper	...	...	...	...	...	...	...	31,797
Petroleum	...	...	...	...	...	...	...	1,079,133
Phosphates of Lime	...	...	...	...	...	...	...	116,162
Provisions:—								
Bacon	...	...	...	...	...	...	...	2,488
Butter	...	...	...	...	...	...	...	25,330
Cheese	...	...	...	...	...	...	...	16,254
Lard	...	...	...	...	...	...	...	—
Canned Meat	...	...	...	...	...	...	...	8,022
Frozen Meat	...	...	...	...	...	...	...	62,683
Sugar:—								
Unrefined	...	...	...	...	...	...	...	8,094
Molasses	...	...	...	...	...	...	...	42,369
Tobacco	...	...	...	...	...	...	...	30,370
Wines (338 Pipes)	...	...	...	...	...	...	...	4,056
Wines (7,800 Dozens)	...	...	...	...	...	...	...	195
Spirits (20 Pipes)	...	...	...	...	...	...	...	239
Spirits (167,700 Dozens)	...	...	...	...	...	...	...	3,354
Wood and Timber	...	...	...	...	...	...	...	111,609
Woodpulp	...	...	...	...	...	...	...	104,659
Other Goods	...	...	...	...	...	...	...	129,045
TOTAL Foreign Imports								2,932,234

Principal Exports, 1950

Chemicals.—								
Salt Cake	...	...	...	...	...	...	...	—
Other kinds	...	...	...	...	...	...	...	1,712
Clay	...	...	...	...	...	...	...	23,456
Coke	...	...	...	...	...	...	...	10,705
Earths	...	...	...	...	...	...	...	765
Iron	...	...	...	...	...	...	...	10,089
Paper	...	...	...	...	...	...	...	993
Strontia	...	...	...	...	...	...	...	6,563
Other Goods	...	...	...	...	...	...	...	56,586
TOTAL Foreign Exports								110,869

The figures in this table are supplied by courtesy of the Port of Bristol Authority.

FOREIGN PORTS FROM WHICH VESSELS ARRIVE

Algeria ...	...	Algiers, Bona, Oran.
Argentina ...	...	Bahia Blanca, Buenos Aires, La Plata, Ibicuy, Rosario, Zarete.
Australia ...	...	Adelaide, Brisbane, Freemantle, Geelong, Hobart, Launceston, Mackay, Melbourne, Port Alma, Port Pirie, Sydney, Wallaroo, Warri.
Brazil ...	...	Ilheos, Manaos, Natal, Parangue, Pernambuco, Recife, Rio de Janeiro, Rio Grande do Sul, Santos.
Belgian Congo ...	...	Matadi.
Belgium ...	...	Antwerp, Ghent.
Bermuda Islands ...	...
British North Borneo ...	...	Tawao.
British West Indies ...	...	Barbados, Bowden, Kingstown, Port Antonio, Basse Terre, Trinidad.
Burma ...	...	Rangoon.
Canada ...	...	Botwood, Halifax, Montreal, New Westminster, Picton, Port Churchill, Quebec, St. John, Three Rivers, Vancouver.
Cape Verde Islands		St. Vincent.
Ceylon ...	...	Colombo.
Chile ...	...	Valparaiso.
China ...	...	Taku.
Cuba ...	...	Newvitas, Puerto Padre.
Cyprus ...	...	Famagusta.
Cyrenaica ...	...	Tripoli.
Denmark ...	...	Copenhagen, Horsens.
Egypt ...	...	Alexandria, Port Said, Suez.
Eire ...	...	Cork, Dublin, Limerick.
Finland ...	...	Hango, Kotka, Mantyluoto, Oulu.
France ...	...	Bayonne, Bordeaux, Deauville, Dieppe, Dunkirk, Havre, La Pallice, L'Orient, Marseilles, Nantes, Nemours, Port de Bouc, Rouen, Tonnay-Charente.
French Cameroons		Tiko Island.
French Equatorial Africa ...	...	Dakar, Grand Bassam, Libreville, Monrovia, Port Gentil.
Gambia ...	...	Bathurst.
Germany ...	...	Bremen, Bremerhaven, Friedrichshaven, Hamburg, Stettin, Wismar.
Gibraltar ...	...
Gold Coast ...	...	Accra, Freetown, Gambia, Takoradi, Winnebah.
Greece ...	...	Patras, Piraeus.
Hong Kong		
India ...	...	Bombay, Calcutta, Madras, Vizagapatam.
Indonesia ...	...	Macassar.
Iran ...	...	Abadan, Basra.
Israel ...	...	Haifa, Tel Aviv.
Italy ...	...	Cagliari, Genova, Livorno, Napoli, Palermo, Trieste.
Japan ...	...	Otaru.
Jugoslavia ...	...	Dubrovnik, Rijeka.
Kenya ...	...	Mombassa.
Malaya ...	...	Singapore.
Liberia ...	...	Grand Bassa.
Malta ...	...
Madagascar ...	...	Tamatave.
Mexico ...	...	Caripito, Tampico.
Morocco ...	...	Agadir, Casablanca, Mogador, Saffi, Sousse.
Mozambique ...	...	Biera, Mozambique, Laurence Marques.
Netherlands ...	...	Amsterdam, Rotterdam.
Netherlands West Indies ...	...	Aruba, Curacao.
New Zealand ...	...	Auckland, Bluff, Lyttleton, New Plymouth, Napier, Wellington.
Nigeria ...	...	Burutu, Lagos, Port Harcourt, Sapele, Victoria, Warri.
Norway ...	...	Bergen, Lørvik, Oslo, Skein, Stavanger, Trondheim, Tyssedal.
Pakistan ...	...	Chittagong.
Panama ...	...
Persian Gulf ...	...	Bahrein Island, Ras Tanura.
Poland ...	...	Gdynia.

Portugal ...	...	Azores, Lisbon, Oporto.
Portuguese West Africa ...	...	Las Palmas (Canary Is.), Madeira, Teneriffe.
Puerto Rico ...	...	San Juan.
Rumania ...	...	Constanza.
San Domingo ...	...	San Miguel, San Pedro de Macoria.
Siam ...	...	Bangkok.
South West Africa ...	...	Walvis Bay.
Spain ...	...	Algeciras, Almeria, Barcelona, Cadiz, Gandia, San Felieu, Seville, Valencia.
Sudan ...	...	Port Sudan.
Sweden ...	...	Bogen, Gelfe, Gothenburg, Helsingborg, Hernosand, Iggesund, Malmo, Norkoping, Pitea, Stockholm, Stocka, Sundsvall, Trelleborg.
Tanganyika ...	...	Sundsvall, Trelleborg.
Tunisia . .	...	Dar es Salaam, Tanga.
Turkey .	...	Sfax, Tunis.
Turkey .	...	Istanbul, Izmir, Panderma.
Uruguay ...	...	Montevideo.
Union of South Africa ...	...
Union of Soviet Soc. Republics ...	...	Cape Town, Durban, East London.
United States of America ...	...	Archangel, Igarka, Keret, Novorossisk, Odessa.
Venezuela ...	...	Baltimore, Baton Rouge, Baytown, Beaumont, Boston, Charleston, Galveston, Houston, Long Beach, Los Angeles, New Orleans, New York, Norfolk, Philadelphia, Port Arthur, Port Everglades, Portland, Port Sulphur, Savannah, Willmington.
	...	Punta Cardon.

III. Water Supply.

(1) *Source of supply for:—*

(a) The Port.

Water supplied by the Bristol Waterworks Company, is available to all premises in the dock area.

(b) Shipping.

Fresh water mains, carrying the Bristol Waterworks supply, are laid on to the quayside berths, except in one small section of the City Docks.

(2) *Hydrants and hosepipes.*

What precautions are taken against contamination?

Standpipes and hoses, used to convey water from the quayside mains to ships, are regularly flushed out and cleansed. Water is allowed to run free for a few minutes before being delivered to the ship's tanks. Samples are periodically submitted for chemical and bacteriological analysis.

(3) *Number of water boats and their sanitary condition.*

Only one such boat is available. During the year a different craft has taken over the function of supplying fresh water to vessels berthed in the one small section of the City Dock which has no water mains.

This craft has a tank of six tons capacity which was thoroughly washed, cleansed and inspected prior to going into service.

To avoid any danger of possible contamination the owners of this craft readily agreed to install a two inch high coaming welded at the junction of the tank manhole and deck.

Periodical samples of water taken from this tank have been found to be satisfactory.

IV. Medical Inspection of Aliens.

(a) Seaport.

A total of 171 aliens arrived at the Port in 1950. Of these, 129 (including 28 persons who were refused permission to land by the Immigration Officer) were medically inspected and the remaining 14 were subjected to a detailed examination.

In the case of one alien, conditional landing was permitted for the purpose of adequate medical examination ashore.

(b) Airport.

A total of 81 aliens landed at the Airport during the year. All of these were medically inspected.

The Airport.

Nine aircraft from "foreign" arrived from time to time during the year; all were boarded and cleared by medical officers of the Port Department. None of the passengers or crew (a total of 105) was detained under the Regulations. Aircrew surveillance, however, was continued where indicated in respect of aircraft from infected airports which proceeded to Bristol for the purpose of maintenance or repairs.

The provisions of the Public Health (Aircraft) Regulations, 1950, so far as these are applicable, have been brought into effect at this port.

MEDICAL INSPECTION OF ALIENS.

Annual return by the Medical Inspector of Aliens for the year ended
31st December, 1950.

173

	SEAPORT					AIRPORT				
	Total	Number inspected by the Medical Inspector	Number subjected to detailed examination by the Medical Inspector	Number of certificates issued	Transmigrants	Total	Number inspected by the Medical Inspector	Number subjected to detailed examination by the Medical Inspector	Number of certificates issued	Transmigrants
(a) Total number of Aliens landing at the Port ...	143	129	14	1*	—	81	81	—	—	—
(b) Aliens refused permission to land by Immigration Officer ...	28	—	—	—	—	—	—	—	—	—
(c) Transmigrants ...	—	—	—	—	—	—	—	—	—	—
Total Aliens arriving at the Port ...	171	129	14	1	—	81	81	—	—	—

Tota. number of vessels/aircraft carrying Alien passengers:	Inwards		Outwards	
	Seaport	Airport	Seaport	Airport
No. of vessels/aircraft dealt with by the Medical Inspector:	67	9	—	15

*Landing necessary for adequate medical examination.

V. Port Health Regulations, 1933 and 1945.

(1) *Arrangements for dealing with Declarations of Health.*

Under a local arrangement with the Pilotage Board, Declaration of Health forms are handed to the Master by the Channel pilot in the Barry Roads. In most cases, these forms are completed for delivery to the health inspector boarding the vessels on arrival.

(2) *Boarding of vessels on arrival.*

All vessels, coastwise or from foreign, are boarded at the locks on arrival by the health inspector on tidal watch. All such vessels from infected foreign ports, all vessels reporting sickness, and all vessels requiring measures to be taken under the Aliens' Order, are boarded by the medical officer. "Infected" or "suspected" ships are boarded by the medical officer and health inspector at Walton Bay from a tug chartered for this purpose.

(3) *Notification to the Authority of inward vessels requiring special attention (wireless messages, land signal stations, information from pilots, customs officers, etc.).*

Wireless messages are relayed to "Portelth", Bristol, if there is any circumstance on board requiring the attention of the medical officer, giving the name of the ship and the expected time of arrival. These messages are forwarded from the Central Health Clinic to the port medical officer and the senior port inspector for appropriate action. Visual signals for transmission to the port medical officer may also be directed to the land signal station at Walton Bay. In addition, masters of foreign-going ships approaching the port are required to hoist whichever of the quarantine signals is appropriate as set out in the 1931 International Code of Signals for visual signals.

It is now customary with certain shipping companies to radio-telegraph "Portelth", Bristol, estimating the time of arrival and giving an indication of health conditions on board. This information is of great practical value. The number of messages so obtained has greatly increased during the year under review.

(4) *Mooring stations, designated under Article 10.*

(a) Inner mooring stations.

Avonmouth

(a) Royal Edward Dock—North Wall.

(b) Old Dock—Dolphin Buoy.

Bristol

Railway Wharf.

Portishead

No. 1 Shed.

(b) Outer mooring station.

Avonmouth, Bristol and Portishead Docks—Walton Bay.

(5) *Particulars of any standing exemptions from the provisions of Article 14.*

There are no standing exemptions at this port for the reasons indicated in section (2) above.

(6) *Experience of Working of Article 16.*

No case of unauthorized boarding was reported during the year but many illegal boarding attempts were prevented, strict warnings being issued to the persons concerned. It is again to be stressed that extreme care and vigilance is needed in order to secure compliance with the provisions of Article 16 (1) of the Regulations, and that few Ship Masters seem to be aware of their obligations in this respect.

(7) *Arrangements have been made for:—*

(a) *Premises and waiting rooms for medical examination.*

All reported cases of sickness among crew and passengers are examined on board at the time of arrival. Crew and passenger inspections are completed on board shortly after reaching berth. Adequate accommodation, if a detailed examination is required for any other purpose under the Regulation, is available in the medical inspection room of the Port Health Office.

(b) *Cleansing and disinfection of ships, persons and clothing and other articles.*

The cleansing and disinfection of infected ships' quarters is carried out under the supervision of the inspectorial staff whenever necessary, using the appropriate disinfectant. Clothing, bedding and other articles are removed by van and treated by steam under pressure at the City Disinfecting Station. The cleansing of persons is provided for at the City Cleansing Station.

(c) *Premises for the temporary accommodation of persons for whom such accommodation is required for the purposes of the Regulations.*

and

(d) *Hospital accommodation available for plague, cholera, yellow fever, smallpox and other infectious diseases.*

Patients suffering from infectious disease, and all cases requiring observation are removed to the isolation hospital at Ham Green.

(e) *Ambulance transport.*

This is provided for by the City Ambulance Service in co-ordination with the measures described under (b) and (d) above.

(f) *Supervision of contacts.*

Inspectors make daily visits to all vessels in port which have arrived from or called at infected or suspected ports and secure a signed report concerning the health of the crew from the officer-in-charge. On arrival, destinations of passengers and crew are also obtained as a routine in respect of these ships. Any sickness developing after arrival is thus brought immediately to the notice of the medical officer. When surveillance is required, forward notices, giving the appropriate information, are posted to the medical officers of health of the districts to which contacts proceed after leaving the ship.

TABLE C.
Cases of Infectious Sickness Landed from Vessels*

Disease	No. of cases during 1950		No. of Vessels concerned	Average No. of cases for previous 5 years
	Passengers	Crew		
Influenza	—	3	2	7.6
Malaria	—	2	2	2.6
Pneumonia	—	2	2	2.0
Pulmonary T.B.	—	2	2	5.6
Venereal Disease	—	491	246	555.2
Total	—	500	254	—

Other diseases not included in Table C above Landed from Vessels*

Disease	No. of cases during 1950		No. of Vessels concerned	Average No. of cases for previous 5 years
	Passengers	Crew		
Circulatory System	1	3	4	4.0
Digestive System... ..	—	26	25	36.4
Genito-Urinary System	—	8	8	5.6
Locomotor System	—	12	12	6.6
Nervous System	—	13	12	11.4
Respiratory System	—	6	6	10.2
Skin and Cellular System	—	26	20	38.0
Rheumatism	—	1	1	3.0
Traumatism	—	12	12	27.2
Ill-defined	—	2	2	5.0
Total	1	109	102	—

*Includes only cases requiring medical attention, but all were not removed from ships to hospital.

TABLE D.

Cases of Infectious Sickness occurring on Vessel during the voyage but disposed of prior to arrival.

Disease	No. of cases during 1950		No. of Vessels concerned	Average No. of cases for previous 5 years
	Passengers	Crew		
Influenza	—	10	3	0.2
Malaria	1	6	4	9.4
Pulmonary T.B.	—	1	1	0.6
Total	1	17	8	—

Other diseases not included in Table D above occurring on Vessels during the voyage but disposed of prior to arrival.

Disease	No. of cases during 1950		No. of Vessels concerned	Average No. of cases for previous 5 years
	Passengers	Crew		
Circulatory System ...	1	3	4	1.6
Digestive System... ..	—	2	2	2.4
Genito-Urinary System ...	—	2	2	0.2
Nervous System	—	1	1	1.0
Ill-defined	—	1	1	0.4
Total	1	9	10	—

(8) *Arrangements for the bacteriological or pathological examination of rats for plague.*

and

(9) *Arrangements for other bacteriological or pathological examinations.*

All pathological and bacteriological examinations are conducted at the Preventive Medicine Laboratories at Canynge Hall. Rats from vessels and quays are systematically examined for evidence of plague. Water samples from hydrants or ship's tanks, and articles of food are examined chemically and bacteriologically when the occasion demands.

(10) *Arrangements for the treatment of the venereal diseases.*

Full information concerning the situation and giving the hours during which the medical officer is in attendance at the venereal disease centres at Avonmouth and at Bristol Docks, is given to the crew of every vessel entering the port. This information is contained in handbills, printed in several languages, which are freely distributed to each ship. When indicated, in-patient treatment under the direction of the venereal diseases consultant, is available at the Frenchay General Hospital, to which the appropriate beds have been transferred.

The arrangement whereby the port medical officer, who is usually the first to ascertain venereal conditions, acts in an additional capacity as medical officer to the venereal disease centre, has continued. This arrangement has worked satisfactorily. A high proportion of the Avonmouth shipping arrivals are of the tanker class and many of these discharge and again sail within twelve hours of docking. Medical attention at the time of arrival, such as may only be provided under the above mentioned arrangement, is therefore available without delay.

The following table relates to seamen treated at the Avonmouth Centre during the years 1944 - 1950. It will be seen that the incidence of the various conditions treated during 1950 closely resembles the pattern for previous years but that the total new cases for the year is somewhat lower than the average for the preceding five years.

Year	Syphilis	Soft Sore	Gonorrhoea	Non. V.D.	Total
1944	154	19	159	311	643
1945	85	26	150	261	522
1946	67	27	254	291	639
1947	60	17	271	252	600
1948	77	20	298	179	574
1949	93	19	260	240	612
1950	62	13	226	217	518

(11) *Arrangements for the interment of the dead.*

Deaths occurring during a voyage, or in port, are fully investigated by the medical officer, and, when infectious disease has been excluded, arrangements for the transference of the dead to the city mortuary, and subsequent interment, are made by the ships' agents.

(12) *Other matter, if any, requiring attention.*

There are no other matters arising out of the Regulations which require attention.

VI. Measures against Rodents.

(1) Steps taken for detection of rodent plague.

(a) In ships in the port.

All cargo vessels were inspected for rats, and in the vast majority conditions were quite satisfactory, evidence of rat activity being either very slight or entirely absent.

In the case of only 43 ships was the evidence of such a degree as to require measures of repression. From these 752 rats were recovered after trapping, poisoning or fumigation with H.C.N. gas. A total of 119 mice was recovered from two further ships after fumigation. Of all rats caught on ships, 378 were sent to the bacteriologist for examination for the presence of *B. Pestis*. These were declared to be free from infection.

During the year there has been a considerable increase in the number of ships that make Avonmouth Docks the first port of discharge thence proceeding to other United Kingdom ports for discharge of the remainder of the cargo. We have thus been afforded an opportunity—not available to the health inspectorate at subsequent ports of call—to examine, often after a sea passage of three weeks or more, the undisturbed surfaces of the cargo in the holds for evidence of rats. Relevant information so obtained, usually supported by the results of successful trapping, was forwarded to other Port Health Authorities in respect of 14 ships, 10 of which held valid certificates. Advice was later received from these Authorities indicating that the ships had, in due course, been fumigated.

Table E.

RATS DESTROYED DURING THE YEAR—1950. ON VESSELS.

	NUMBER OF RATS				
	Black	Brown	Species not recorded	Examined	Infected with Plague
January ...	215	—	—	40	—
February ...	34	—	—	34	—
March ...	71	—	—	50	—
April ...	8	—	—	4	—
May ...	90	—	—	41	—
June ...	23	—	—	18	—
July ...	12	—	—	9	—
August ...	37	—	—	18	—
September ...	34	—	—	17	—
October ...	83	—	—	56	—
November ...	23	—	—	22	—
December ...	122	—	—	69	—
Total in Year	752	—	—	378	—

Table F.

RATS DESTROYED DURING THE YEAR—1950.
ON DOCKS, QUAYS, WHARVES AND WAREHOUSES.

		NUMBER OF RATS				
		Black	Brown	Species not recorded	Examined	Infected with Plague
January	...	20	11	—	—	—
February	...	23	38	—	2	—
March	...	75	258	—	61	—
April	...	—	12	—	—	—
May ...	...	49	67	—	25	—
June	...	54	198	—	103	—
July	...	3	110	—	3	—
August	...	37	199	—	133	—
September	...	61	183	—	63	—
October	...	68	195	—	144	—
November	...	48	166	—	116	—
December	...	34	173	—	79	—
Total in Year		472	1,610	—	729	—

It is of interest to record that within recent years many ships have been granted deratisation certificates in Canadian and United States ports after fumigation with Methyl Bromide. This gas has not yet been used in this port for the fumigation of rat infested ships. Its application has been confined to infested cereals, which are loaded into barges for the purpose. Methyl Bromide gas is claimed to be a very effective exterminator of rodents and insects, whilst its non-residual, non-persistent and penetrative properties make it a particularly suitable gas for the treatment of weevil infested grain. It is probable that this gas, which is no more dangerous to man than many other fumigants, will be put to greater use when a simple and reliable "chemical test" gas indicator has been produced.

Degree of Rat Infestation found aboard vessels.

No. of Rats per Ship	No. of Ships	Total Rats Recovered
1 - 5	12	22
6 - 10	9	68
11 - 15	5	65
16 - 20	6	107
21 - 25	4	89
26 - 30	3	86
31 - 35	2	68
over 36	2	247
Total	43	752

The United States authorities are also issuing deratisation certificates to ships treated by the method of setting poison baits composed of a solution of sodium fluor-acetate in water. This poison is said to be very attractive to rats and produces excellent results. Unfortunately, it is very toxic both to human beings and to domestic animals. Very great care has to be exercised and stringent safeguards must be adopted when the poison is being handled and used as a rat bait. Probably, the risks in-

volved in the use of "1080", as it is called, have influenced the authorities in this country in their decision not to make the poison available for general use.

Prevention of Damage by Pests Acts, 1949

This act came into force in 1950 and replaces the Rats and Mice (Destruction) Act, 1919. Its chief aim is to provide legislation for the safeguarding of foods against damage and loss as a result of the activity of insects and rodents, requiring measures of prevention and, in some cases, where indicated, the extermination of these pests.

Section 23 provides that Part 1 of the Act, which deals with the above measures in relation to rats and mice, shall not apply to ships trading between this country and ports outside the limits of the United Kingdom, the Channel Islands and the Isle of Man. In the same section power is given to the Minister of Agriculture and Fisheries to make an Order in Council, making Part 1 of the Act, with certain modifications, applicable to all types of craft trading exclusively within the above mentioned limits. It is anticipated that the Order will come into operation in 1951, giving Port Health Authorities power to take action when "coasters" and vessels plying inland water-ways require to be treated if infested with rats or mice.

Under the provisions of the old Rats and Mice (Destruction) Act, Port Health Authorities were empowered to take action in respect of rat infested foreign-going ships, despite possession by the ship of an internationally valid deratisation certificate. It is regretted that this power is not contained in the new Act.

Table G.

Measures of Rat Destruction on Plague "Infected" or "Suspected" Vessels or Vessels from plague infected ports arriving in the Port during the year 1950.

Total number of such Vessels arriving	...	...	...	44
Number of such Vessels fumigated by SO ₂	...	...	...	—
Number of rats killed	...	...	...	—
Number of such Vessels fumigated by HCN	...	...	...	—
Number of rats killed	...	...	...	—
Number of such Vessels on which trapping, poisoning, etc. were employed	...	...	...	2
Number of rats killed	...	...	...	6
Number of such Vessels on which measures of Rat destruction were not carried out	...	...	...	42

Table H.

Deratisation Certificates and Deratisation Exemption Certificates issued during the year—1950.

Net Tonnage	No. of Ships	No. of Deratisation Certificates Issued					No. of Deratisation Exemption Certificates	Total Certificates issued
		After fumigation with			After trapping poisoning etc.	Total		
		H.C.N.	Sulphur	H.C.N. and Sulphur				
Ships up to 300 tons	13	—	—	—	—	—	13	13
“ from 301- 1,000	19	—	—	—	—	—	19	19
“ “ 1,001- 3,000	16	2	—	—	—	2	14	16
“ “ 3,001-10,000	80	17	—	—	—	17	63	80
“ over 10,000 tons	—	—	—	—	—	—	—	—
Totals	128	19	—	—	—	19	109	128

(b) *On quays, wharves, warehouses, etc. in the vicinity of the port.*

As a result of repressive measures, sometimes by trapping and at other times by poisoning, it is known that 1,610 brown and 472 black rats, 2,082 in all were destroyed during the year. It is probable that the total number killed is much in excess of this figure, for it is reasonable to assume that many more rats were exterminated than were later recovered during the periods—amounting to five months in all—when treatment with poison bait alone was carried out. The department of preventive medicine examined 729 of the rats recovered and all were declared to be free of plague infecting organisms.

It is to be recorded that there is a considerable decline in the number of black rats infesting premises within the docks. Evidence of their activity has not been so widespread. This evidence is also much less pronounced in the buildings concerned. The number of this species destroyed is 50% less than the figure for the preceding year. On the other hand, comparative figures for brown rats indicate a 40% increase. To some extent this is due to the successful treatment, chiefly by trapping, of two mills and a warehouse which were known to be centres of infestation. These centres are still receiving attention and show a marked improvement.

The managements of various private industries within the docks have had their attention drawn to the relevant provisions of the Prevention of Damage by Pests Act. It has been made known to them that powers are available to Local Authorities under the Act, requiring, where it is reasonably possible, the elimination of rat habourage and the rat proofing of buildings. To make a satisfactory job of rat proofing in the case of certain premises within the dock, would be extremely costly. In some instances it would be impossible to achieve owing to the lay-out and the "built up" nature of the soil upon which buildings have been constructed. However, the importance of harbourage elimination has been stressed and, so far, the response of the managements, in carrying out recommendations, has been encouraging.

(2) *Measures to prevent the passage of rats between ships and shore.*

- (i) All vessels from infected or suspected ports are required to attach efficient rat guards to the mooring ropes.
- (ii) Suitable lengths of tarred hessian are wrapped around moorings, outside the leads, where the standard types of rat guards are not available.

(3) *Methods of deratisation.*

(a) *On ships.*

Fumigation with hydrogen cyanide gas is always recommended. During the year, all vessels requiring fumigation were treated with this method.

(b) *Premises within the vicinity of docks or quays.*

In all premises where rat activity is discovered, frequent pre-baiting, poisoning and trapping is carried out.

(4) *Measures taken for the detection of rat prevalence in ships and on shore.*

As outlined in (1) (a) above, routine inspection is made for signs of rat activity on the undisturbed surface of cargoes prior to discharge. Follow up inspection, including sprinkle sand tests, are subsequently carried out. On shore, regular inspection of all premises and waste ground is made, particular attention being given to premises where foodstuffs are stored.

(5) *Rat-proofing.*

(a) *To what extent are docks, wharves, warehouses, etc., rat proof ?*

The majority of docks, wharves, warehouses and private establishments within the dock area are of efficient rat-proof construction.

(b) *Action taken to extend rat-proofing.*

(i) *In ships.*

When rat-proofing could effectively be carried out without extensive structural alterations, the owners were recommended to do this work. In many ships, rat-proofing was found to be particularly necessary in respect of provision storerooms. In each case, the recommendations were complied with.

(ii) *On shore.*

Whenever structural alterations were made to existing buildings steps were taken to ensure that effective rat-proofing was incorporated. All new constructions during the year were similarly dealt with.

VII. Hygiene of Crews' Spaces.

(a) *Foreign-going ships.*

"Wear and Tear" defects were ascertained in 19% of the British ships inspected during the year. "Other" defects were present in 26% of ships. Within the latter category were chiefly included conditions of dirt, and verminous infestation, discovered in crews' quarters, galleys, food stores and pantries.

It has become almost an annual routine to refer to such conditions as quite unsatisfactory, especially when considered in relation to improvements in the standards of accommodation and in other amenities. Why should this be so? Apart from the individual habits of certain persons, is the problem, in general, associated with environmental influences which, when the crew accommodation is located right aft and therefore in comparative isolation, tend to produce in the men an attitude of indifference towards personal hygiene and the cleanliness of their surroundings? This question is posed in the light of the interesting fact that when ratings are housed in the amidship block, a higher standard of hygiene is discernible amongst the men and in their quarters. It is difficult to decide whether this very desirable improvement is due to better environment, or to the fact that, being in close proximity to the Master's and Officers' accommodation, the

quarters are inspected more frequently. No doubt both are contributing factors and, if only to illustrate the beneficial results obtained by bringing about this change, they are worthy of note.

Foreign-Going Ships	British s.s. m.v.		Foreign s.s. m.v.	
No. of re-visits to vessels in dock by P.H.I.	1,092	558	497	362
No. of vessels reported defective	193	35	23	3
No. of vessels—defects remedied	174	34	23	3

ACTION TAKEN		No. Defects			No. Defects reported by For'd Notices, etc., to :		No. Ships	
HYGIENE OF CREW SPACES								
Defects	Found	Rem'd	Not Rem'd	Other PHA'S	M.O.T. Surveyor	Owner Master	British	Foreign
Orig. Constr.	19	6	13	5	10	13	9	—
Wear and Tear	424	304	120	111	29	131	121	5
Dirt and Vermin	440	416	24	22	—	27	170	21
No. of Notices served on :		Owner/Master			B.O.T.		Forward	
		23			3		17	

A greater number of ships are using Avonmouth Docks as an intermediate rather than a terminal port of discharge ; consequently the need to send forward notices to other Port Health Authorities concerning defects which, for convenience, would best be remedied at the final port, has increased somewhat. Seventeen notices were sent to Port Health Authorities, 23 to ship owners and 3 to the Ministry of Transport Surveyors in respect of 13 "constructional", 131 "wear and tear" and 27 "dirt and vermin" defects.

Replies were obtained in each instance indicating that all defects had been remedied.

Notices concerning defects in 7 ships were sent to this Authority from other ports. These received the necessary attention and the defects were remedied prior to the departure of these vessels.

(b) *Coastwise Vessels.*

A total of 734 visits and revisits were made to coastwise vessels during the year. These were mainly in connection with British owned craft. Here again, but to a less extent than in foreign-going ships, dirt and vermin defects predominated. It is, however, recognised that these conditions prevail invariably in old vessels, some of which were built more than 30 years ago. In these craft, quarters for ratings are so located and arranged that they are quite comfortless and provide for minimum standards only. Messing facilities, clothes lockers and washplaces are often not available. Many have no conveniently accessible supplies of drinking and washing water. Heating, and natural and artificial lighting arrangements are frequently found to be unsatisfactory. It is small

wonder that dirty quarters are found under such conditions, as they provide no incentive to the men to keep themselves or their accommodation clean.

Coastwise Vessels	British s.s. m.v.		Foreign s.s. m.v.	
No. of re-visits to vessels in dock by P.H.I.	412	232	15	75
No. of vessels reported defective	40	6	—	1
No. of vessels—defects remedied	35	5	—	1

ACTION TAKEN		No. Defects			No. Defects reported by For'd Notices, etc., to :		No. Ships	
HYGIENE OF CREW SPACES								
Defects	Found	Rem'd	Not Rem'd	Other PHA'S	M.O.T. Surveyor	Owner Master	British	Foreign
Orig. Constr.	2	—	2	—	—	2	1	—
Wear and Tear	31	6	25	10	—	25	11	1
Dirt and Vermin	86	82	4	—	—	4	39	—
No. of Notices served on :		Owner/Master			B.O.T.		Forward	
		8			—		1	

It is true that space for accommodation on these vessels is very limited and that the provision of roomier berths, messrooms and washplaces with suitable storage facilities for dry and perishable stores would be a very difficult structural problem. Nevertheless, if these vessels are to continue to ply our coast for some years yet—and there is reason to believe that they will—every consideration should be given to these requirements.

The arrangement whereby men are accommodated under the fore-castle head cannot be recommended on the grounds of safety, comfort or convenience and should be discontinued. The authorities concerned should therefore instruct Owners to submit plans for new accommodation for the crew whenever such ships are to undergo survey. In this manner the problem can be tackled so as to bring about these much needed improvements.

Table J.—Classification of Nuisances.

	Nationality of Vessel		
	British	Other Nations	Total
Number inspected during the year ...	1,228	542	1,770
Defects of original construction ...	21	—	21
Structural defects through wear and tear ...	437	18	455
Dirt, vermin and other conditions prejudicial to health	486	40	526

Dock Sanitation.

(a) Factories and Workplaces.

The cleanliness and the state of repair of almost all of these buildings is satisfactory. It has been found that whenever any recommendations are made by this department the owners are most ready

to co-operate ; and it is pleasing to record that it has not been necessary to issue any notices (statutory or informal) in respect of these establishments during the year.

(b) *Canteens.*

The standard of cleanliness of all canteens within the dock area has been satisfactory throughout the year. Again no formal action of any kind has been called for, any minor defects noted being remedied speedily upon verbal intimation.

(c) *Public Conveniences.*

During the year the Association of Sea and Air Port Health Authorities requested data regarding these facilities. Accordingly a comprehensive report was forwarded to this Association.

Remote controlled electric lighting has been installed in several of the buildings, and other minor improvements have been carried out by the Port Authority.

Confirmation has been received from the Port of Bristol Authority of their intention to recondition the existing native type convenience near the dry dock, and to erect a new convenience in the same vicinity for the exclusive use of ships' officers and their wives.

When construction is completed this section of the Dock area will be adequately provided with sanitary facilities for all classes.

In the City docks it has been suggested that sanitary accommodation be made available at Bathurst Wharf and that the war damaged conveniences at " F " and " R " shed sections be reconstructed.

No. of Routine Visits to:				
Premises in Dock Area	Dock Sanitation	Public Conveniences	Tip	Salvage Dumps
1,142	343	1,267	68	956

(d) *Refuse Collection.*

To facilitate the collection of refuse from ships and dock wharves the Port Authority has, on the recommendation of the Health Authority provided new concrete refuse bays at four points adjacent to frequently used berths. In addition eight of the existing bays have been considerably enlarged.

The City Cleansing Department has throughout the year dealt expeditiously with all accumulations of refuse, and has done much to maintain the high standard of cleanliness of the dock. The magnitude of this Department's work is reflected in the fact that 3,341 loads of trade and ship domestic refuse were removed from Avonmouth Dock alone during the year. In addition, daily visits were made to vessels in the dock to collect vegetable matter which would otherwise have become inextricably mixed with general refuse. After suitable treatment this was utilized as pig feeding material.

No complaint has been received regarding either fly or odour nuisance, a fact which attests to the co-operation of ship-masters, port authority employees and the Cleansing Department.

VIII.—Food Inspection.

There has been no unusual or important occurrence calling for comment in relation to the inspection of imported foods during the period under review. The total imports of food showed a considerable decline, most marked in grain and cereal products. There was also a reduction in the quantity of dairy products and frozen meat cargoes discharged at the port. In the case of the latter commodity, however, the total of 62,683 tons is only 1,400 tons less than for the previous year, despite the complete cessation of shipments arriving from the Argentine after mid-August.

Approximately 14,445 lbs. of bananas were distributed to various hospitals for consumption by the children. This fruit was over-ripe for trade distribution, although perfectly sound for immediate use, and was made available by the kind co-operation of the representatives of the Ministry of Food and Messrs. Elders & Fyffes, Ltd.

The tables indicating the quantities of various foods condemned or subjected to reconditioning show that the amounts involved are, in relation to the tonnage imported, comparatively small and indicate that the handling, stowage and transportation of these foods was satisfactory. Inspectors have given considerable attention to the protection of certain food cargoes which require to be handled with care and safeguarded against contamination.

Routine inspection of canned goods indicated that in the case of canned tomatoes and canned sardines, the copper and tin content, and in some instances the canning and processing methods, were not always satisfactory. Appropriate action was taken in all cases, either with Ministry of Food representatives or with the private traders concerned.

A consignment of canned fruit pulp, the property of the Minister of Food, was warehoused for some months in the dock area and in due course showed visible evidence of progressive deterioration. As it was the property of the Minister of Food action could not be taken until it had been sold. When it was noted that parcels of this consignment were being released to the trade without prior inspection the matter was regarded with some concern and brought to the notice of the Divisional Food Officer. It was pointed out that in each instance arrangements should be made for inspection prior to delivery or that, alternatively, particulars of purchaser and destination should be made known to this authority so that the Medical Officer of Health of the area concerned could be advised, in order to take appropriate action. Neither of the above suggestions appeared acceptable, but the Ministry subsequently arranged a full examination of the remainder of the consignment when all unsound and doubtful tins were set aside for the decision of the Food Inspector.

It is important to realise that when commodities of this nature and in this condition are dispersed throughout the country the chances of unsound food being inadvertently used for human consumption are greatly increased. This could be avoided if the Ministry of Food and other food brokers would avail themselves of the services of Health officials when necessary.

Shellfish.

There are no shellfish beds or layings within the jurisdiction of the Bristol Port Health Authority. The supply of shellfish marketed in Bristol is obtained mainly from the following sources:

Cockles from St. Clair, South Wales and King's Lynn, Norfolk.

Escallops from Brixham, South Devon.

Mussels from Appledore, North Devon and St. Clair, South Wales.

Oysters from Cornwall, others from Thames Estuary and Continental countries via London.

Winkles from Appledore, North Devon.

Whelks from King's Lynn, Norfolk.

Parrots (Prohibition of Import) Regulations, 1930.

During the year, four vessels arrived with twenty birds of the parrot specie on board. Of these, one died during the vessel's stay in port and was burnt on board under the supervision of the port health inspector. Importation of the remaining 19 was prohibited under the regulations.

VIII. Food Inspection (1)

Meats (Condemned)

Description	Decomposition and Mould				Brine Stain				Contamination and Taint				Total			
	t.	c.	q.	lb.	t.	c.	q.	lb.	t.	c.	q.	lb.	t.	c.	q.	lb.
Beef	4	14	2	18					1	3	14		4	16	2	4
Mutton/Lamb	2	15	1	10	1	3	3	2	4	0	1	12	7	19	1	24
Pork		6	0	0									6	0	0	
Veal	4	3	16										4	3	16	
Offal	8	0	15										8	0	15	
Poultry	1	2	26										1	2	26	
Prepared Meats	1	0	17										1	0	17	
Total	8	11	3	18	1	3	3	2	4	2	0	26	13	17	3	18

Canned Goods (Condemned)

Description	Reason for Condemnation	Quantity (Tins)	t. c. q. lb.			
			t.	c.	q.	lb.
Canned Meats	Blown, burst, pierced, crushed and/or rust holed.	58		1	3	3
Canned Fruits		6,574	10	8	0	7
Canned Jams		397		4	1	22
Canned Tomatoes		468		8	2	19
Canned Tomato Puree	ditto	31		2	0	8
Canned Fish	ditto	320			3	12
Canned Vegetables	ditto	75			3	20
Glass Jars and Tins	Crushed and broken.					
Mincemeat		1,528		11	0	24
Total	—	9 451	11	18	0	3

Miscellaneous Foods (Condemned)

Description	Reason for Condemnation	t. c. q. lb.			
		t.	c.	q.	lb.
Fresh Fruit	Decomposition/Mould/Contam.	133	1	3	18
Dried Fruit	Decomposition/Insect Infes.	1	18	0	10
	Fermentation /Mould/Contam.				
Fresh Vegetables	Decomposition/Contamination	4	8	2	3
Dried Vegetables	Perished/Weevil Infestation		4	2	13
Flour	Gross Contam./Mouldy	17	15	1	14
Wheat	Oil Contamination	3	10	0	0
Orange Peel in Brine	Gross Contamination		3	1	20
Rolled Oats and Oatmeal	Wet Damage / Rancidity /Weevil Infestation	1	10	0	8
Pearl Barley	Weevil Infestation		3	1	12
Semolina	Weevil Infestation			1	16
Walnuts in Brine	Gross Contamination	17	2	0	
Sweetened Fat	Gross Contamination		1	0	26
Chutney	Mould				2
Cheese	Perished/Contamination		1	0	9
Total	—	163	15	2	11

VIII. Food Inspection. (2)

Particulars of Foods Detained for Reconditioning at
Local or other Food Depots.

Description of Food	Quantity	Reason for Detention	Tons (approx.)
Frozen Lambs	2,416	Contam./Taint/Brine	47
Frozen Sheep	2,839	Mould/Decomposition	91
Frozen Bone in Fores and Hinds	798	Mould/Decomposition	42
Frozen Boneless Beef	1,217 Pkgs.	Mould/Decomposition	47
Frozen Boneless Veal	38 "	Mould/Decomposition	2
Frozen Boneless Mutton	215 "	Mould/Decomposition	7
Frozen Offal	360 "	Mould/Decomposition	14
Frozen Pork	146 "	Mould/Decomposition	5
Flour	815 Sacks	Contam./Mould	51
Butter Milk Powder	829 "	Dampness/Mould	30
Cases Canned Meat	930	Wet damage/slight rust	28
Crates Lemons	200	Contamination	6
Cartons Butter	356	Brine Contamination	8
Lugs Tomatoes	2,389	Mould/Decomposition	37
Dried Fruit	330	Wet damage/Fermenting	4
Canned Tomatoes	750	Rust stained/'Springer'	32
Total	—	—	451

Note: Forward notices were sent to the appropriate Health Authorities where damaged foods were released to reconditioning depots outside Bristol.

VIII. Food Inspection. (3)

Samples of Imported Foodstuffs taken 1950 and sent for examination by the Analyst or Bacteriologist.

No. of Samples	Description of Commodity	Country of Origin	Examined for	Result
2 tins	Apricot Pulp	Spain	Metallic contam.	Satisfactory
1 tin	Baked Beans	S. Africa	Metallic contam.	Satisfactory
1 tin	Blackberries	Holland	Metallic contam.	Satisfactory
2 samples	Candied Peel	Australia	Preservatives	Satisfactory
3 samples	Citrus Peel	S. Africa	Preservatives	Satisfactory
1 sample	Coffee (Ship's stores)	S. Africa	Adulteration	Satisfactory
3 tins	Cherries	Italy	Metallic contam.	Satisfactory
2 samples	Fondant	S. Africa	Soundness	Satisfactory
1 tin	Grapes	S. Africa	Metallic contam.	Satisfactory
1 tin	Luncheon Meat	France	Soundness	Satisfactory
1 tin	Luncheon Meat	Holland	Soundness	Satisfactory
1 tin	Peas	Australia	Preservatives and metallic contam.	Satisfactory
2 tins	Peas	N. Zealand	Preservatives and metallic contam.	Satisfactory
2 tins	Pork Brawn	France	Soundness	Satisfactory
1 tin	Pineapple Pulp	Australia	Preservatives and metallic contam.	Satis. but tin content approaching permis- sible limit Satisfactory
1 sample	Plum Pulp	Holland	Preservatives and Purity	Satisfactory
2 tins	Pilchards	S. Africa	Metallic contam.	Satisfactory
1 tin	Rhubarb	Holland	Metallic contam.	Satisfactory
3 tins	Salmon	Canada	Metallic and Bac- terial contam.	Excessive tin and bacterial content
3 samples	Strawberry Pulp	Holland	Preservatives	Satisfactory
40 tins	Sardines	Portugal	Metallic contam.	High lead content MoF. advised
23 tins	Sardines	French Morocco	Metallic contam.	Satisfactory
9 tins	Tomatoes	Italy	Metallic contam.	Satis. for metals. Full examn. of consignment made and all 'Blown and Springer' tins rejected.
5 tins	Tomatoes	Italy	Metallic contam.	Satis. for metals. Blown tins containing CO ₂ gas. All 'Blown and springer' tins rejected.
3 tins	Tomatoes	Italy	Metallic and Bac- terial contam.	Satis. for metals. Evidence of yeast and sarcinae in blown tins. All 'Blown and springer' tins rejected.
5 tins	Tomatoes	Italy	Metallic and Bac- terial contam.	Satis. for metals. Blown tins showing fermenting coliform organisms and anaerobic streptococci. All 'Blown and springer' tins rejected.
36 tins	Tomatoes	Italy	Metallic contam.	Satisfactory

V

SPECIAL REPORTS

1. The Preventive Medicine Laboratories in 1950.
2. The Department of Preventive Medicine 1933-1951
3. The Geriatric Services of Bristol.
4. Medical Records of the Health Department.
5. School Health.

Appendix

Staff of the Preventive Medicine Department 1950.

Staff of the Public Health Department 1950.

Constitution of the Health Committee 1950.

1. THE PREVENTIVE MEDICINE LABORATORIES IN 1950

Dr. K. E. Cooper

(Professor of Bacteriology and Director of Preventive Medicine Laboratories)

The year under review, 1950, is the first complete year in which the laboratory has functioned purely as a bacteriology laboratory. It still, however, includes in its work, not only what is provided by the Public Health Laboratory Service, but also the venereal diseases and consultant bacteriology required by the Regional Board Hospitals.

This combination offers many advantages, not only to the laboratory but to the authorities served. The centralisation of the specialist experience of the staff engaged in bacteriological routine especially in the techniques involving the use and preparation of specialised media, the performance of complement fixation tests, and the use and care of animals, is of great mutual benefit to the staff, and leads to much greater efficiency in the performance of these tasks. Adequate control of media and reactions is only possible when a sufficient number of both positive and negative tests are performed. This is one of the reasons why certain types of examination must be done on a regional basis in a limited number of centres.

Both public health bacteriology and venereal disease laboratory work necessitate this regional centralisation to maintain efficiency. But even this is not sufficient in many specialised examinations, and to-day we are fortunate in having National Reference Laboratories for venereal diseases, virus investigations, salmonella and enteric identifications, as well as many others. We have throughout the year, for example, compared all doubtful or discrepant serological investigations for syphilis with the laboratory tests performed with the new cardiolipin antigen in Dr. Orpwood Price's laboratory at Whitechapel. From the 9,000 Wassermann reactions performed during the year 25 sera showing unexpected or discrepant results were compared. In these specially chosen difficult sera only six discrepancies with the cardiolipin antigen occurred, and no false positive Wassermann reaction in the Bristol laboratory was found. This confirms that we have been successful in keeping our Wassermann antigen as specific, though not quite as sensitive as the new cardiolipin antigen. On the other hand, our Kahn antigen is deliberately prepared to be rather more sensitive than the Wassermann, and the seven discrepancies found between it and the cardiolipin antigen were all positive reactions with cardiolipin negative sera. This use of the Kahn antigen ensures that we do not miss any serologically detectable cases of syphilis; it is more sensitive but less specific than the cardiolipin.

Difficult sera selected from 9,000 Wassermann reactions.

<i>Cardiolipin (U.S.A.)</i>	<i>Bristol Wassermann</i>	<i>Bristol Kahn</i>
Negative 8	Negative 6 Doubtful 2 Positive 0	Positive 6 Doubtful 1 Negative 1
Positive 14	Negative 4 Doubtful 6 Positive 4	Positive 13 Doubtful 1 Negative 0

2 reactions with the cardiolipin antigen were anticomplementary, and one was not examined by this method.

Control of this kind of reaction in the laboratory is of particular importance in a port where results have continually to be compared with those obtained on patients in other countries. It is hoped that any person having cause to doubt the correctness of a particular laboratory result will communicate with the laboratory immediately. In this way comparative results can always be obtained from central laboratories in cases of difficulty, and the reliability of the local laboratory maintained at a maximum.

Regionalisation has, however, had one disadvantage. It has become impossible for the laboratory to make a report on the work it has done within the strict limits of the city boundary. Only the department directly responsible for the patient or the submission of the specimen can summarise its findings with the area for which it is responsible. We have therefore been forced to ask each of the local authority departments to summarise its own findings, including the reports made by the laboratory. In future this report will be confined to the advances achieved in the actual work within the laboratory. It is hoped to record this in such a way as to explain the ways in which the laboratory can be of use to the community, and to increase the collaboration between the laboratory and the authorities it serves. The laboratory now makes any public health examinations required for the neighbouring parts of Somerset and Gloucestershire.

Laboratory Examinations

The number of examinations made in each section retained in the laboratory is almost identical with last year. Slight decreases in the number of examinations for (1) diphtheria, and (2) throat swabs for other organisms, correspond to the continued absence of the former since its disappearance following immunisation, and the lessening of the latter following more extensive chemotherapy. An increase in examinations for dysentery is recorded again, but fortunately not to the height of the abnormal year 1945. Dr. Mayr-Harting in collaboration with Dr. Hammarström of the Swedish Public Health State Service has commenced the study of the phage typing of Sonne Dysentery. This enables individual strains of the organism to be identified, and is helping to trace paths of infection and follow in detail the methods of spread of the disease. Increases in the examinations of waters, pasteurised milks, ice-creams and milk bottles reflect the increasing attention being paid to these possible vehicles of infection and the expansion of the laboratory work to neighbouring counties. The number of specimens from kitchens was less than the previous year's intensive investigation of this problem, and has probably reached a steady level.

Increased cultural work has been started on tuberculosis specimens. This is an attempt to make more accurate and sensitive the detection of excretors of tubercle bacilli.

The following isolations were made during the year: Typhoid (phage type A) 7; (phage type E) 1; (institutional) Paratyphoid B (phage type I) 1.

Salmonella typhi-murium	.....	23	(one from a sample of pressed beef)
„ enteritidis	.....	1	
„ cholera suis	.....	1	
„ (type unknown)	.....	1	
Sonne dysentery	.....	216	
Flexner „	.....	4	(Institutional)
Schmitz „	.....	5	(Institutional)

Two samples of pressed beef yielded staphylococcus pyogenes.

Forty-one specimens of sera examined for Leptospirosis gave two positive results.

Forty-eight batches of cockles examined for faecal pollution gave positive evidence in 16 batches.

Other Routine Laboratory Work

Vaccine lymph is stored by the laboratory at -20°C . and distributed by post on the day of request to all general practitioners in Bristol, Somerset, Gloucestershire and Wiltshire who have agreed to take part in the Local Authorities Arrangements under Section 26 of Part IV of the National Health Service Act (1946). In all 6,552 batches were dispatched in the year, an average of 21 per weekday.

The laboratory also distributes prophylactic for diphtheria immunisation to general practitioners in Bristol and to medical officers of health in the surrounding area. Typhus vaccine and measles normal adult serum (convalescent serum is not normally available), are distributed to general practitioners, on request, within the same area. All other prophylactics should be obtained through the normal trade channels. Botulinus antitoxin is the only therapeutic reagent stocked by the laboratory.

Increased teaching commitments have made it necessary to reduce slightly the amount of media supplied to the hospitals, a position which is likely to become even more difficult in the future. Where possible the hospital laboratories are undertaking or planning to undertake the preparation of the simpler bulk media they use, and using the bacteriology department for the supply of the more specialised types.

Research

Work on the action of antibiotics on bacteria was continued. Papers on this subject were read at the meeting of the Microbiological Society which held its summer meeting in Bristol University. Other work (previously reported) on typhoid and on gonococcal infection was published. Mr. Guise, F.M.I.L.T., published a case of pulmonary aspergillosis, diagnosed as a result of laboratory findings. Mention has already been made of the work started on the phage typing of Sonne dysentery, and a preliminary paper has been prepared for publication. Work on the possibility of distinguishing between animal and human faecal pollution of water, milks and some foodstuffs is proceeding.

Teaching

Classes for bacteriology, as a subsidiary subject for B.Sc., have been continued with the maximum numbers permitted by the accommodation. In October the first class in bacteriology as a main subject for the degree in General Science was started. Classes for medical degrees have continued and one research student for the M.Sc. degree has been accommodated. Two staff commenced research for Ph.D.

No students applied to take the Diploma in Public Health course for the new session 1950-51, and until the prospects of medical posts in public health are more certain it seems doubtful if any more medical graduates will attempt this higher qualification.

Examination Successes (Staff)

Miss B. G. Waters and Mr. G. D. Ball both qualified as Associates of the Institute of Medical Laboratory Technology. Miss M. Pickering and Mr. P. R. Hobbs passed the Intermediate Examination of the Institute.

Publications (1948, 1949, 1950) not previously reported

1. Typhoid Fever—A Recent Outbreak (c), Laboratory Investigation of Typhoid. K. E. Cooper, J. Roy. San. Inst. (1950) LXX. No. 3. 200.
2. The Bacteriological Grading of Ice-cream. K. E. Cooper. Municipal Journal (1949), April 22.
3. The Laboratory Examination for Gonococcal Infection in the Female. K. E. Cooper, A. Mayr-Harting and A. E. W. McLachlan, Brit. Jour. Ven. Diseases (1950), Vol. 26, p. 16.
4. The diffusion of antiseptics through agar gels Pt. 2. The Effect of temperature on the assay of streptomycin. K. E. Cooper and W. W. Gillespie. Read at the Meeting of the Society for General Microbiology. Sept. 1950, Bristol.
5. The diffusion of antiseptics through agar gels Pt. 3. The Temperature of agar during the early hours of incubation of agar plates and its importance in assays. K. E. Cooper and A. H. Linton. Read at the Meeting of the Society for General Microbiology. Sept. 1950, Bristol.
6. A case of Pulmonary Aspergillosis. E. Guise. The Laboratory Journal (1950). Vol. 4, No. 8, p. 329.
7. Assay of antiseptics using a Gaussian Co-ordinate System. G. Herdan. Research 2 (1949) 950.
8. The serology of *Ps. pyocyanea*. A. Mayr-Harting. J. Gen. Microbiol. 2, 31.
9. Abstracts for the Veterinary Bulletin from English, French, German, Russian, Czech and Slovak articles. A. Mayr-Harting.

PREVENTIVE MEDICINE DEPARTMENT

Staff (1950)

- R. H. Parry, M.D., F.R.C.P., D.P.H., *Professor of Preventive Medicine.*
 R. C. Wofinden, M.D., B.S., D.P.A., D.P.H., *Lecturer in Public Health.*
 G. Herdan, M.Sc., Ph. D., LL.D., *Lecturer in Statistics.*
 S. W. Hinds, M.D., M.R.C.P., M.R.C.S., D.T.M. & H., *Lecturer in Social and Preventive Medicine.*

Preventive Medicine Laboratories

- K. E. Cooper, B.Sc., Ph.D., M.R.C.S., L.R.C.P., *Reader in Bacteriology and Director of Laboratory.*
 Dorothy Woodman, M.Sc., M.D., B.S., M.R.C.S., L.R.C.P., *Lecturer in Clinical Pathology.*
 S. T. Crowther, M.R.C.S., L.R.C.P., D.P.H., *Lecturer in Bacteriology (until March 31st).*
 C. N. Iland, M.B., Ch.B., D.C.P., Ph.D., *Lecturer in Bacteriology (from September 1st).*
 Anna Mayr-Harting, M.D., Ph.D., *Lecturer in Bacteriology and Bacteriologist.*
 D. H. Johnson, M.B., Ch.B., *Demonstrator in Bacteriology.*
 D. B. Peacock, M.B., Ch.B., *Research Assistant and Assistant Bacteriologist.*
 A. H. Linton, M.Sc., *Recognised Teacher and Assistant Bacteriologist.*
 Patricia Wells, B.Sc., *Recognised Teacher and Assistant Bacteriologist.*

EXAMINATIONS MADE DURING THE YEAR 1950

Public Health Examinations:—

Total for the Year

SWABS, EAR, NOSE AND THROAT

Cultures for diphtheria	00000	00000	00000	00000	00000	4,251
Cultures for other organisms	00000	00000	00000	00000	00000	1,289
Films for Vincents	00000	00000	00000	00000	00000	546
Penicillin sensitivity	00000	00000	00000	00000	00000	1
Cultures for whooping cough	00000	00000	00000	00000	00000	13
Virulence tests	00000	00000	00000	00000	00000	1

SWABS, OTHERS

Cultures for organisms	0.0000	0.0000	0.0000	0.0000	0.0000	156
Penicillin sensitivity	0.0000	0.0000	0.0000	0.0000	0.0000	1
Films for tubercle bacilli	0.0000	0.0000	0.0000	0.0000	0.0000	28
Cultures for tubercle bacilli	0.0000	0.0000	0.0000	0.0000	0.0000	25
Biological tests for tubercle bacilli	0.0000	0.0000	0.0000	0.0000	0.0000	3
Gram films (additional)	0.0000	0.0000	0.0000	0.0000	0.0000	3
Cultures—anaerobic	0.0000	0.0000	0.0000	0.0000	0.0000	4

SPUTUM

Films for tubercle bacilli	00000	00000	00000	00000	00000	4,018
Cultures for tubercle bacilli	00000	00000	00000	00000	00000	72
Biological tests for tubercle bacilli	00000	00000	00000	00000	00000	3
Concentration tests for tubercle bacilli	00000	00000	00000	00000	00000	81
Cultures—aerobic	00000	00000	00000	00000	00000	51
Cultures—anaerobic	00000	00000	00000	00000	00000	—
Penicillin sensitivity	00000	00000	00000	00000	00000	11
Gram films (additional)	00000	00000	00000	00000	00000	4

FAECES

Cultures for dysentery	3,679
Cultures for salmonella and enteric	1,364
Concentration tests for tubercle bacilli	3
Cultures for tubercle bacilli	2
Amoebae	1
Films for tubercle bacilli	8

URINE

Cultures for pathogenic organisms	.....		.....	.....	.....	43
Biological tests	.....	.....	.....	.....	.....	2
Enteric	.....	.....	.....	.....	.....	5
Cultures—anaerobic	.....	.....	.....	.....	.....	3
Films for tubercle bacilli	.....	.....	.....	.....	.....	1

BLOOD

[illegible]

WATERS

Complete bacteriological examinations	22,000	20,000	20,000	20,000	20,000	20,000	444
Pathogenic organisms	2,000	2,000	2,000	2,000	2,000	2,000	5
Coli	2,000	2,000	2,000	2,000	2,000	2,000	17

MILK AND DAIRIES

[illegible]

Sterilised or Heat Treated	250
Phosphatase	1,393
Cream Line	269
Bottle rinses	471
Ice Cream	321
Churn rinses	18
Gelatine powders	24
Ice lollies	16
Cream for count and coli	2

FOODSTUFFS AND KITCHEN HYGIENE

Gram films (additional)	12
Films for parasites	254
Films for tubercle bacilli	12
Cultures—aerobic	100
Cultures—anaerobic	73
Biological tests	1
Animal tissues for histology (Blocks)	77
Restaurant specimens	748
Rinse waters	51
Wiping towels	45
Meat—(?)Horseflesh	2
Cultures for pathogenic organisms	97
Films for carcinoma cells	1
Brine for coli typing	5
Cockles for coli	223
Dry ingredients for methylene blue tests	6
Shell fish	38
Fungi	11
Yeasts	12

MISCELLANEOUS

Hairs for ringworm	3
Vomit for pathogenic organisms	9
Water from washing machine	1
Strain for identification	4
Specimen from dog for pathogenic organisms	1
Specimen from dog for aerobic culture	1
Specimen from dog for anaerobic culture	1
Mice for salmonella and enteric	8
Wallaby for culture	6

OTHER EXAMINATIONS (Bristol Clinics, Doctors and Hospital Bacteriology).

URINE

Deposit	45
Friedmans	530
Quantitative Friedmans	7
Cultures	132
Films for tubercle bacilli	64
Concentration tests for tubercle bacilli	1
Gram films (additional)	89
Biological tests	32
Cultures for tubercle bacilli	12
Ova	1
Enteric	1
Pathogenic organisms	1

FAECES

Anoebic dysentery, cysts	18
Ova, parasites, protozoa, oxyuris, tapeworm	56
Pathogenic organisms	10
Dysentery	8
Enteric	2

BLOODS

Paul Bunnell	.....	.....	.....	.....	.....	.....	.....	17
Widals	.....	.....	.....	.....	.....	.....	.....	12
Cultures	.....	.....	.....	.....	.....	.....	.....	3

PUS AND OTHER FLUIDS

Gram Films (additional)	.....	.....	.....	.....	.....	.....	.....	391
Cultures—aerobic	.....	.....	.....	.....	.....	.....	.....	492
Cultures—anaerobic	.....	.....	.....	.....	.....	.....	.....	353
Cultures for tubercle bacilli	.....	.....	.....	.....	.....	.....	.....	25
Carcinoma cells	.....	.....	.....	.....	.....	.....	.....	—
Penicillin sensitivity	.....	.....	.....	.....	.....	.....	.....	12
Vaccine	.....	.....	.....	.....	.....	.....	.....	3
Leptospira examinations	.....	.....	.....	.....	.....	.....	.....	23
Biological tests	.....	.....	.....	.....	.....	.....	.....	53
Concentration tests for tubercle bacilli	.....	.....	.....	.....	.....	.....	.....	1
Yeats	.....	.....	.....	.....	.....	.....	.....	1
Films for tubercle bacilli	.....	.....	.....	.....	.....	.....	.....	50
Pyrogens	.....	.....	.....	.....	.....	.....	.....	2

MISCELLANEOUS

Milk for Coli	.....	.....	.....	.....	.....	.....	.....	2
Milk for count	.....	.....	.....	.....	.....	.....	.....	2
Water for biological tests	.....	.....	.....	.....	.....	.....	.....	6
Sputum for carcinoma cells	.....	.....	.....	.....	.....	.....	.....	3
Worm for identification	.....	.....	.....	.....	.....	.....	.....	3
Hairs for Gram films	.....	.....	.....	.....	.....	.....	.....	2
Hairs for cultures	.....	.....	.....	.....	.....	.....	.....	1
Milk for tubercle bacilli	.....	.....	.....	.....	.....	.....	.....	2
Milk for biological tests	.....	.....	.....	.....	.....	.....	.....	1
Histology (Blocks)	.....	.....	.....	.....	.....	.....	.....	2
Cultures for identification	.....	.....	.....	.....	.....	.....	.....	6
Cultures for biological tests	.....	.....	.....	.....	.....	.....	.....	1
Strains for freeze drying	.....	.....	.....	.....	.....	.....	.....	22
Culture for identification	.....	.....	.....	.....	.....	.....	.....	5
Sputum for biological tests	.....	.....	.....	.....	.....	.....	.....	1
Specimen for parasites	.....	.....	.....	.....	.....	.....	.....	1
Fungi	.....	.....	.....	.....	.....	.....	.....	1

C.S. FLUIDS

Biological tests	.....	.....	.....	.....	.....	.....	.....	6
Cultures for tubercle bacilli	.....	.....	.....	.....	.....	.....	.....	1

SPUTUM

Biological tests	.....	.....	.....	.....	.....	.....	.....	6
Films for tubercle bacilli	.....	.....	.....	.....	.....	.....	.....	9
Gram films (additional)	.....	.....	.....	.....	.....	.....	.....	4
Cultures	.....	.....	.....	.....	.....	.....	.....	6
Penicillin sensitivity	.....	.....	.....	.....	.....	.....	.....	2

VENEREAL DISEASES

Blood for Wasserman Reaction	.....	.....	.....	.....	.....	.....	.....	9,205
Blood for Kahn Reaction	.....	.....	.....	.....	.....	.....	.....	9,078
Complement Fixation Tests for Gonorrhoea	.....	.....	.....	.....	.....	.....	.....	237
Blood for Quantitative Reaction	.....	.....	.....	.....	.....	.....	.....	1,377
C.S. Fluids for Wasserman	.....	.....	.....	.....	.....	.....	.....	510
C.S. Fluids for cells	.....	.....	.....	.....	.....	.....	.....	221
C.S. Fluids for globulin	.....	.....	.....	.....	.....	.....	.....	216
C.S. Fluids for protein	.....	.....	.....	.....	.....	.....	.....	10
C.S. Fluids for chlorides	.....	.....	.....	.....	.....	.....	.....	—
C.S. Fluids for Lange	.....	.....	.....	.....	.....	.....	.....	260
Films for gonococci	.....	.....	.....	.....	.....	.....	.....	6,204
Cultures for gonococci	.....	.....	.....	.....	.....	.....	.....	5,604
Urine for gonococci	.....	.....	.....	.....	.....	.....	.....	8
Fluid for spirochaetes	.....	.....	.....	.....	.....	.....	.....	—

59,945

2. THE DEPARTMENT OF PREVENTIVE MEDICINE, 1933—1951

By Bessie Bell, B.A.

1933-36

The Department of Preventive Medicine was opened at Canynge Hall in September, 1933, by the then Minister of Health, Sir Hilton Young. Until that time the public health bacteriology and pathology of the City of Bristol had been carried out partly in the laboratory of the Public Analyst and partly in the Pathology Department of the University. Increased requirements made it necessary to provide increased facilities and negotiations carried out between the City Council and the University led to the formation of a new department which was given the name of the Department of Preventive Medicine. An agreement was made between the University and the City Council whereby the University was to receive an annual grant from the city and the department was to carry out all the pathology and bacteriology of the city and its hospitals.

In order to carry out the necessary arrangements for the new department the Professor of Pathology, Professor Walker Hall, resigned from the Chair of Pathology and was appointed the Director of the Laboratories. The vacant Chair of Pathology was filled by the appointment of Professor Geoffrey Hadfield of the Royal Free Hospital. Dr. R. H. Parry, the Medical Officer of Health, was appointed Professor of Preventive Medicine, and a senior and a junior pathologist were appointed, namely Dr. J. D. Allan Gray and Dr. D. M. Stone respectively.

In his speech at the opening ceremony, Dr. Loveday, the Vice-Chancellor, described the steps by which the connection between the city health services and the University Pathology Department had grown up during more than thirty years, until it had culminated in this complete union in the Department of Preventive Medicine.

Canynge Hall, Whiteladies Road, already the property of the University, offered spacious accommodation for the new department and also for the Department of Pathology, and the first three floors were adapted and equipped for this purpose. In the first year the Department of Pathology occupied the ground floor and the Department of Preventive Medicine the first floor and part of the basement where the animals were kept and the media prepared.

In 1934 the laboratories of the Public Analyst were transferred from Queen Square to the second floor. This was in accordance with the agreement between the City Council and the University, the move coinciding with the retirement of the Public Analyst, Mr. Russell. These laboratories, now under the direction of the Public Analyst, Mr. Needs, became part of the Preventive Medicine Department, and the two sections, housed under the same roof, were in a position more easily to help each other with their investigations and problems.

The contract which was made between the University and the City Council was, at first, to be of two years' duration but was afterwards extended to three years, and during that time the department was responsible for all the public health work of the city. A definite section of clinical pathology was established to carry out the clinical pathology for the city hospitals and to meet the requirements of the general practitioners. The clinical pathologist also visited the wards at Southmead Hospital every day and carried out the necessary examinations at a small laboratory there.

In addition to these activities demonstrations and lectures on the application of Preventive Medicine were given to medical practitioners and to the staff of the Medical Officer of Health including health visitors, nurses and sanitary inspectors. Research work was done on pasteurised milk, ice-cream and imported meat. A brochure on the examination of pasteurised milk by the staff of the department was published under the auspices of the Bristol Health Committee and this received widespread recognition.

In July, 1936, Dr. Walker Hall retired from the position of Director, and with his retirement various changes took place in the department. Dr. R. H. Parry, as Professor of Preventive Medicine, took over the general supervision personally, and an additional assistant was appointed in the clinical pathology section to carry out the routine work which Dr. Walker Hall had done. Much of the private pathology which had been sent to Dr. Walker Hall personally from sources outside the city, such as Gloucester, Swindon, Minehead Hospital, Torquay, etc., now ceased to come, but the private practitioners continued to send their specimens and to seek advice.

The three-year contract between the City Council and the University expired at this time and was renewed in October, 1936, for another two years, and the grant was reviewed, taking into account the increased requirements in the Public Analyst's section, viz. sewage examinations, gas examinations and atmospheric pollution.

1936-39

In 1937 the first steps were taken towards the foundation of a teaching section in the department when a course in Applied Bacteriology for a university certificate in Applied Bacteriology was approved by the University.

1938 was another year of changes in the staff. Dr. D. M. Stone resigned from her post early in the year and was succeeded by Dr. D. Woodman and later in the year Dr. J. D. Allan Gray resigned and was succeeded by Dr. K. E. Cooper. These two newly-appointed members of staff received the titles of Pathological Officer and Senior Bacteriologist respectively, and took charge of the two sections which were to expand so rapidly during the period of the next ten years.

In 1938 the staff of the Food and Drugs Inspectors was transferred from their office in Queen Square to a room on the fourth floor of Canynge Hall and a further step was made towards facilitating the field work of the Public Health Service.

In the following year Dr. Cooper introduced a more modern method of examining swabs for K.L.B. Until this time the swabs had been examined by the Loeffler method but, from now onwards, they were examined by the more reliable Tellurite method. This change entailed the preparation of new media and necessitated the alteration of the system of reporting the results to the practitioners.

1939-45

The war years 1939-45 were a period of very rapid expansion in all directions in the department. Dr. Cooper has written a full account of the work of the department during these years in the Report of the Medical Officer of Health for the year 1944, and from this a very clear conception can be obtained of the many and varied activities of all sections of the department.

On 1st July, 1940 the department became an associated laboratory of the Emergency Public Health Laboratory Service and from then onwards was responsible for the laboratories not only of the City but of the clinical areas immediately surrounding Bristol. Increased work again necessitated increased staff and accommodation and the University was able to meet the requirements of the department at this time.

The staff was increased during these years from five qualified and nine assistant members to nine qualified and thirty-two assistant members. Three rooms on the fourth floor, which had previously been used as store-rooms, were now equipped to accommodate the media section and this section was then transferred from the basement to these new quarters. The room thus vacated in the basement was used to enlarge the animal houses. An additional room on the fourth floor was equipped as a laboratory and used for the examination of milks and waters. The room on the first floor which was thus vacated was converted into a second bacteriology laboratory. These alterations were carried out during the year 1943-4 and the general "move round" was completed early in 1944.

The work at Southmead Hospital was also increasing by leaps and bounds at this time and the need for more laboratory accommodation was becoming very acute. Plans were therefore drawn up by the City Council for equipping a small extension to the existing laboratory and the work was gradually completed. One of the pathologists from the department was attending the laboratory at Southmead daily and three of the technicians were seconded there. There was also a small laboratory equipped at Ham Green Hospital at this time and one technician from the department seconded there. The hospital at Frenchay, which was in course of erection at the beginning of the war, was given over to the Americans and they remained there until the end of the war.

The two-year contract with the City Council ended in 1938 and the position was again reviewed and a further contract was made for another two years. In 1940 the Preventive Medicine Sub-Committee of the University was formed. This was, and is, a sub-committee of the Finance Committee and includes the Vice-Chancellor and the Treasurer. It is called when any urgent problem of finance arises and it meets regularly every autumn when the estimates for the following year are presented and examined. This meeting is followed by a joint meeting of the sub-committee and members of the City Health Committee and at this meeting the plans for further agreements between the University and the City Council are made.

In looking back over those war years a strange medley of events comes to the mind: of air-raid siren wailing warnings and "all clears" at all times of the day; of time spent in the reinforced air-raid shelter in the basement; of dispatch riders rushing in and out of the department for supplies of anti-toxin for first-aid posts in the city; of fire watching in the attics and of trying to sleep through the strange noises of the laboratory when off duty; of breakfasts in the caretaker's flat; of incendiary bombs descending on the hall and being successfully dealt with by Mr. Provins and other fire watchers; of strange material being brought in for examination after air raids; water from burst mains and strange unidentifiable articles picked up by the police; of the equipment of shadow laboratories in various parts of the city in case of damage to the main building or of invasion. These and many other events too numerous to mention took place here, as they did all over the country, during those years of unrest and uncertainty.

The city was at this time extraordinarily free from epidemic disease, the only severe epidemic being an outbreak of paratyphoid fever which occurred in 1941. The source of infection was very quickly detected and the spread of the disease successfully checked. To help with the extra load of work caused by this sudden outbreak a team of American workers was sent from the American Red Cross Hospital at Salisbury. This consisted of Dr. Dean Fleming, Miss Caswell and Miss Small and twelve nurses. This team stayed in Bristol for about two months and a very friendly relationship grew up between the British and American staffs.

While all these happenings were taking place the teaching section of the department was steadily advancing. In 1940 a course of Bacteriology as a subsidiary B.Sc. subject was approved and increased numbers of students took this course each year. The department also undertook the teaching of Bacteriology to medical students in the Department of Pathology. Courses of study were continued for health visitors and sanitary inspectors.

During the war years the status of the laboratory technician was very much raised. Their association, previously known as the Pathological and Bacteriological Laboratory Assistants' Association, became a limited company in 1942 and received the title of the Institute of Medical Laboratory Technology. Technicians were now required to hold School Certificate on entry to the department and were prepared for the examinations of the Institute, viz. Intermediate, Associateship and Fellowship, in classes given at first voluntarily in the department and, from 1944 onwards, in the College of Technology. National scales of wages were drawn up, to participate in which technicians were required to hold the diplomas of the Institute.

1945-49

This was a period of further development in the department. In 1946 Dr. W. Hobson was appointed to fill the newly-formed position of Lecturer in Preventive Medicine and became the first whole-time teacher in Preventive Medicine. This appointment was necessary because of the large number of courses in public health which were being given in the department. These courses included a course for the Diploma in Public Health which was re-organized in the session 1946-47, when twelve students were enrolled.

In this year also a full-time Medical Statistician, Dr. G. Herdan, was appointed.

With these additional activities more accommodation was required and there was a further "opening-up" of Canynge Hall. Until now the rooms on the top floor, which were attic rooms, had not been used. It was now decided to let in more light to these rooms by enlarging the windows and by the use of fanlights, and by this method a whole new floor became available. To make these rooms accessible a lift was installed from the basement and the provision of this lift was felt to be a very great asset to the hall. These alterations were completed in 1947. The rooms on the top floor were allocated to the Professor of Preventive Medicine, the Lecturer in Preventive Medicine, the Medical Statistician and the Lecturer in Bacteriology. Three rooms were used for the Food and Drugs Office and the room thus vacated on the floor below became the new Serology room. The library was also transferred from the first floor and the vacated room there was given to the Secretary.

In 1947 Dr. Cooper received the status of Reader in the University and became the Director of the Laboratories.

Resultant on the passing of the National Health Act of 1946 the University entered into negotiations with the Medical Research Council and made application for the recognition of the Laboratory of the Preventive Medicine Department as an Associated Laboratory of the Public Health Service. This recognition was granted and the Preventive Medicine Laboratory became an Associated Laboratory from 1st April, 1947. The agreement was to be for three years in the first instance and then subject to one year's notice on either side. This association brought about a great change in the financial arrangements of the department. The amount of work done was now estimated by the unit system, so many units being allotted to the examination of a specimen according to the amount of work it entailed. A unit received a certain monetary value and by means of these calculations the amount of the claim to be made by the University on the Medical Research Council was estimated.

More changes followed next year when the National Insurance Act came into full operation. In accordance with a scheme drawn up by the Regional Hospital Board, the University and the Board of Governors of the Teaching Hospitals, the pathologists in the department were to be transferred to the Regional Hospital Board. It followed, of course, that the bulk of the pathology which had been carried out in the department was now to be transferred to the Regional Board Hospitals, viz. Southmead, Frenchay and Ham Green. Some of this work, however, was to remain, for example the V.D. work and some hospital bacteriology, and an agreement was made between the University and the Regional Board that the Board would meet the claims for this work, estimated according to the unit system already mentioned.

In the autumn of 1949 the great upheaval took place and Dr. Lewis, previously Assistant Pathologist in the department, and thirteen technicians were transferred to the laboratories at Southmead, Frenchay and Ham Green, taking with them the main part of the pathology work. Dr. Woodman, while in charge of the laboratory at Frenchay, remained a member of the University staff. There remained to be provided for at Canynge Hall all the Public Health and V.D. work of Bristol and the adjacent clinical areas, the more intricate problems of bacteriology for the hospitals and general consultant work for those who required it.

1950

The department gradually emerged from the state of unrest and commotion of the previous two years and the members of the staff who remained quickly adapted themselves to the change of conditions which existed.

An important expansion took place in the Public Analyst's section at this period. Following a meeting with representatives of the University in 1947, to discuss the advisability of the project, and a further meeting of the City Council in 1948, the Public Analyst was authorised to purchase the apparatus for absorption spectrophotometry for vitamin assay and trace elements to be installed in Canynge Hall and to appoint two assistants with special training to work the apparatus. Considerable work was necessary to adapt a laboratory to house this apparatus which was purchased by the City Council, and this work was completed and the apparatus installed in 1950. In the same year a senior assistant and a technician were appointed to undertake this new branch of the work.

Very considerable developments were now taking place in the section of the department occupied with teaching and research, and much important advancement was made at this time. Dr. W. Hobson was succeeded in 1949 by Dr. Stuart W. Hinds who was appointed Lecturer in Social and Preventive Medicine. Until this time the teaching of Preventive Medicine had been virtually confined to the last year in the medical students' curriculum. Following several discussion within the Faculty of Medicine it was now spread more evenly over the whole of the undergraduate period. The course, which was commenced in the summer term of 1950, was modified to include lectures on statistics, visits to communal feeding places, bedside teaching of the social aspects of disease, in addition to the usual lectures and demonstrations. In this way it has been possible to integrate the teaching of Social and Preventive Medicine with the clinical work and to give a more complete picture of the patient and his normal environment.

Arrangements were made for the establishment of a new Department of Bacteriology within the Department of Preventive Medicine and a Chair of Bacteriology was created. Dr. Cooper accepted the invitation of the University to occupy this Chair and the new department came into being on 1st January, 1951.

To summarise the position in 1951, the work of the department now falls into three divisions (*a*) the new Department of Bacteriology, with Professor K. E. Cooper in the Chair, now responsible for the teaching of Bacteriology throughout the University, and for the direction of the routine public health work of Bristol and the adjacent clinical areas; (*b*) the section of Preventive and Social Medicine with Dr. S. W. Hinds, Lecturer in Preventive and Social Medicine, and (*c*) the section of the Public Analyst, Mr. E. G. Whittle, F.R.I.C.

cal Area)

Chronic Sick

<i>Weston-s-Mare M.C.</i>	<i>Others</i>
1. 52 beds at Axbridge	1. 155 beds

on Hospital.

visiting service.

n approx. 89 M. and 230 F.

n Stapleton Hospital (total of 342).

properly be regarded as Part III (L.A.) cases and 104

se of absence of hard and fast ruling by Ministry of

a week (Stapleton).

Chronic mental cases) is hopelessly low since this would mean
beds per 1,000 for the chronic sick, i.e., 880—1,100 beds
hospitals contain many non-Bristol patients.

tions."

3. THE GERIATRIC SERVICES OF BRISTOL.

By R. C. Wofinden (Deputy M.O.H.)

CITY AND COUNTY OF BRISTOL

(Estimated population 440,000: Males over 65, 20,000; Females over 60, 40,000).

LOCAL AUTHORITY

WELFARE SERVICES COMMITTEE

(Accom. of aged in need of care and attention, compulsory removal of aged; welfare services for aged; care of handicapped, etc.).

HOUSING COMMITTEE

(Housing programme for "able-bodied" aged)

PRE-WAR PROVISION

1. 166 one bedroomed flats on estates
Knowle —76 | Inc.
South'm'd —60 | rent
Bedm. —30 | 10/2 week

POST-WAR PROGRAMME

One-bedroomed flats mostly occupied by aged persons

	Built	Building
2. 96 flats in central area (some part-furnished inc. rents 11/1—13/-).	Southmead 59 Nil Lockleaze 37 46 Law, Weston 155 40 Oldbury Ct. 20 31 Tynning 16 Nil Westleigh Pk. 9 Nil Brooklyn Rd. 4 Nil Manor Farm Nil 32 Clifton Vale Nil 18 Henbury Nil 68 French Pk. Nil 24	
Total 262.	Totals 320	279

(Inc. rents 19/2—21/3 a week).

Accommodation	Welfare of Aged Blind	Welfare of Aged
Existing accom. for aged (inc. some handicapped)	Accom. in course of preparation	Future Proposals
1. 100 Fishponds Rd. Males —263 Females —242 Part III (N.B. 110 sick beds in addition) — R.H.B. Total Part III—505.	1. 5 All Saint's Rd. 18 2. 119 Pembroke Rd. 21 3. Bourton group 38 4. 159/161 Redland Rd. 84 Total 101	Envisage 1 newly built home every 2 years and 1 adapted home each year Sites/new homes (units of 10) Law, Weston — 1 Oldbury Ct. — 1 Dundry — 2 Manor Farm — 1 Henbury — 2 Estimated new accom. by 1961 1. New buildings — 5 2. Adapted buildings — 14 Additional beds provided 501 (inc. 101 in course of prepn.).

HEALTH COMMITTEE

Home-Help Service

(Panel for Aged and Ch. Sick)

Part-time Staff=909 approx.
Patients being helped=785 cases
Hours worked per annum:—
=330,000 approx.

Service for Aged and Chronic Sick, mostly a charge on Rates.
s.d.
Cost of H.H.S.=2/1 per hour.

District Nursing Service (by Agency B.D.N.A.) (Including Nursing Equipment)

No. of nurses=90
No. of new cases (over 65 years) per annum=3,550
No. of new cases of all ages=7,556

Average Cost per pt. treated:—
4/3 per visit
£7.7.0 per patient

(Main types of cases dealt with:—
Heart disease
Disease of blood vessels
Resp'y
Gastro Intest.
Cancer)

Sick and Health Visiting Service

Cases being visited 413
Cases needing urgent Admission (1.2.51):—
(a) To Hospital 34
(b) To Old Persons Home 13

BRISTOL COUNCIL OF SOCIAL SERVICE

OLD PEOPLE'S WELFARE ADVISORY COMMITTEE

(Containing members of many organisations interested in old people)

Old Peoples Welfare (General Purposes) Committee (Executive)

Accommodation

House Management Committees

West Town House

For Elderly Infirm 20 places
Grant aided by Local Authority
Full charge £29.0 a week
Minimum charge £11.0 a week

Stratheden

For Able Bodied 21-37
"lettings"
Not grant aided
Charges 21/6 —
39/- a week including mid-day meal

Proposed Frail Ambulant Home

Estimated fee—
£35.0. a week

Chiropody

3 part-time chiropodists.
400 people receiving regular treatment each year.
Charge 2/- a head.

Comments:—

1. Total units of accommodation provided up to 31.12.50=582 in form of one-bedroomed and bed-sitting room flats.
2. Policy of Housing Committee to continue building one-bedroomed flats for old people, although some of these will be occupied by young couples.

Comments:—

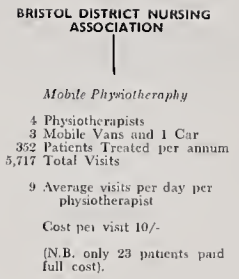
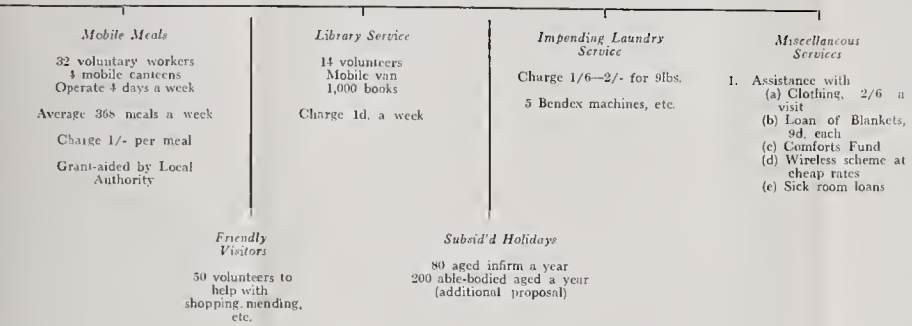
1. There are 505 existing units of accommodation for old people which, on current estimates will have grown to 1,000 by 1961.
2. M'Keon's estimate of 14 beds per 1,000 for Part III cases (i.e., 660 places) appears to be inadequate, particularly if Local Authorities are made responsible for "frail ambulant" patients. Assuming 21% of old people need Part III accommodation, there is need for 1,500 places in Bristol at the present time, i.e., 3 times present accommodation. It should be noted, however, that another "official estimate" of need is 1%, i.e., 600 places in Bristol. The proportion of such accommodation should be 2 : 1 : 1 : Females : Males.
3. "Health" advice is given and administrative health arrangements made by M.O.H. on behalf of Welfare Services Committee.
4. Medical services to residents in 100 Fishponds Road, are provided by 3 part-time G.P.'s who also attend the 110 sick cases in Regional Hospital Board beds.
5. Medical services for patients in smaller hostels will be provided by G.P.'s.
6. The cost of 100 Fishponds Road is £3.8.3d. per case per week. The estimated cost of small hostel accommodation is £4.0.0d. per case per week.
7. Present waiting list for accommodation—15 on average.

Comments:—

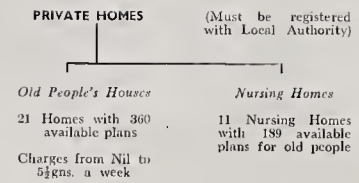
1. The Health Committee have decided recently to reduce the size of the Home-Help Service and not to expand the District Nursing Service.
2. There will obviously be repercussions on the Welfare Services Committee and the Regional Hospital Board resulting in increased pressure on residential and hospital accommodation.
3. It should be noted that the estimated cost of caring for an elderly person in his or her house (including the old age pension, the cost of national assistance and the cost of services provided by the local authority such as, where required, the home help, home nurse and health visitor) amounts to approximately £2 per week.
4. The Health Committee do not provide a "Sitter-in" service.

COMMENTS:—

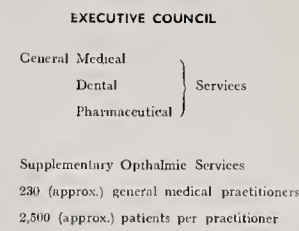
1. The Home Help service was transferred to the L.H.A. on 15.2.51.
2. The Bristol Council of Social Service is essentially a pioneering body as will be obvious from the number of services rendered to old people; they are, of necessity, on a small scale.
3. The Bristol Council of Social Service is the only body making any attempt at co-ordination. This is done through their Old People's Welfare Advisory Committee on which sit individuals who work in various Corporation Services, the area geriatrician, etc., etc.
4. They have already demonstrated the need for adequate home services for chiropody, mobile meals, Laundry, Library and Visiting Services.



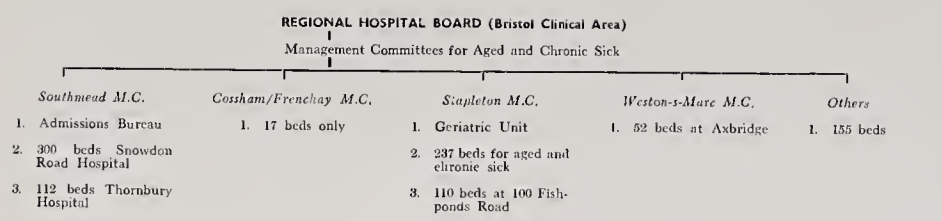
- COMMENTS:—
1. This service is subsidised from voluntary funds as neither the Health Committee nor the Welfare Services Committee has power to assist financially.
 2. Treatment is recommended by general medical practitioner.
 3. Such services are criticised on the grounds that:—
 - (a) Treatment is not under the supervision of a consultant.
 - (b) Diffusion of effort of trained physiotherapists who should work in properly equipped hospital departments.
 4. Nevertheless, this service is appreciated by patients and doctors.



- COMMENTS:—
1. Private homes in Bristol have all been registered and are of good standard.



- COMMENTS:—
1. Difficulty in achieving hospital admission.
 2. Absence of a domiciliary consultant service
 3. It has been estimated that C.P.'s (on average) visit each of their patients 3 times a year and each patient visits the doctor's surgery 3 times a year. The figures for old people are 7½ and 2½ visits respectively i.e., the C.P. visits his elderly patients 3 times as often as he visits the average patient
 4. There is an obvious need to teach geriatrics to medical students



- COMMENTS:—
1. Geriatrics staff—1 area geriatrician, 1 S.H.M.O. and 2 J.H.M.O.'s at Stapleton Hospital.
 2. Absence of any specialised out-patients clinics or systematised consultant home visiting service.
 3. Dissociation of admissions bureau from Geriatric Unit. Cases awaiting admission approx. 89 M. and 230 F.
 4. Total aged and chronic sick occupying beds in clinical area—1,014.
 5. This figure of 1,014 does not include mental defectives, psychotics, epileptics in Stapleton Hospital (total of 312).
 6. The geriatrician estimates that 85 males and 139 females in Stapleton should properly be regarded as Part III (L.A.) cases and 104 cases in Snowdon Road Hospital should be regarded as Part III cases.
 7. Difficulties arise regarding respective responsibilities of R.H.B. and L.A. because of absence of hard and fast ruling by Ministry of Health about "frail ambulant" cases.
 8. Average cost of a hospital bed is £5.19.0. per week (Snowdon Road) and £4.0.0. a week (Stapleton).
 9. M'Keon's estimate of chronic hospital bed need of 1 bed per 1,000 (including chronic mental cases) is hopelessly low since this would mean that 440 beds would be adequate for Bristol. Dr. Laidlaw's estimate of 2-2½ beds per 1,000 for the chronic sick, i.e., 880—1,100 beds is probably nearer the truth, although it must be remembered that the Bristol hospitals contain many non-Bristol patients.
 10. There is a good deal to be said in favour of the perpetuation of "mixed institutions."

4. MEDICAL RECORDS OF THE HEALTH DEPARTMENT

By R. G. Emblem (Medical Records Officer)

Records Survey

During the latter part of 1949 a full and detailed survey was made of record keeping in the various sections of the Health Department. It was apparent that, in many cases, changes and additions had been made as the occasion arose without reference to any overriding policy; it, therefore, seemed necessary first of all to have agreement on the principles involved.

In very broad terms the purposes of record keeping are twofold, namely, to create a complete and readily accessible medical and social history of each patient, and to make available a picture of the health of the community by analysing individual records. The acceptance of these principles implies the preparation of records in a uniform style not hitherto practised in the department. With some notable exceptions, it will be necessary eventually to make certain fundamental changes in quite a number of the offices. Progress is necessarily slow both because these changes are considerable and because it is important that the most opportune moment is chosen for effecting them, so that there is little interruption to normal working arrangements. This is being done, wherever possible, in a series of gradual steps.

Filing

All documents which go to make up a complete medical history must be regarded as the *patient's* records, and not the records of either the examining doctor or of the clinic where the examination takes place. This principle, usually called, rather inadequately, the Unit Filing System, has been adopted by most hospitals. Its application to public health work raises considerable administrative difficulties, principally because a patient's history is obtained from the records of so many people: midwife, health visitor, clinic nurse, doctor and consultant, who carry out their work in the home, the school, the clinic, and the hospital. The Unit filing system is, however, being installed in the School Health Service. This has involved such changes as numerical filing, the creation of indices and a revised appointments system, and bringing all the records from the schools and outlying clinics to Mary Bush Lane. This centralisation has meant increased responsibility for individual officers, but, as suitable staff are available, it has added greatly to the efficiency of the service. Although the main object in changing the system was to provide the medical staff with a detailed history of every patient, it has been found that improvements have been effected by tightening the control over the records; this in itself will simplify any mechanisation that may be contemplated later. Plans are also well advanced for improving the filing and analysis of the Maternity and Child Welfare, and Tuberculosis records. The Mental Health Service has been using the Unit filing system for many years, attaining a high standard of efficiency no major changes are contemplated in this section except in relation to statistics.

Analysis

The problems of analysing the records are mainly confined to the difficulty in obtaining sufficient staff. In practice this means that we must be content with analysing a limited amount of data in pre-arranged and restricted correlations. But frequently requests for information are received, not only from the Health Department, but also Ministries, other local government departments, hospitals, family doctors, and others, which necessitate laboriously

hand sorting the records. Often these requests cannot be met, thus discouraging many potentially important investigations. But during the past year our resources have been considerably increased by the very generous offer of the City Treasurer to make available a certain amount of the machine time of his Powers Samas punched card accounting equipment. The use of these machines involves a completely different technique of analysis which may necessitate appreciable changes in the keeping of the records. It is difficult to explain the many advantages without a detailed account of the system, which would be out of place in this report, but suffice it to say that any information can be produced from the records which have been mechanised, so rapidly that little or no pre-arranged selection need be made, and that all correlations of all recorded data are quickly obtainable. For example, the death registrations have been analysed on these machines throughout the year. Formerly, with very little limited clerical time available, it was found possible only to produce figures for 36 underlying causes of death, in sex and broad age groups; little or no regard could be paid to any of the other items, such as occupation, social class, place and date of death, and place of residence, to say nothing of the subsidiary causes of death and the nature of any injuries there may have been. By using various international, national and local codes it is now possible to correlate any of these items on request by using a sorting machine working at the speed of 400 cards a minute, without keeping any figures progressively throughout the year. The full advantages of mechanisation will be more apparent when the system has been working for some years, for incidences which are small in number over a short period may well prove to be statistically significant when analysed in detail over a number of years. The following far-fetched example will illustrate the amount of detail that is now available: it is possible to tell within a few minutes how many retired bricklayers of 67 years of age were certified as having died, in the City Ward of Clifton, during January, 1950, from fracture of the skull terminating in broncho pneumonia as a result of collisions between motor vehicles and street cars on public highways.

There is, however, one serious drawback to the present arrangement. The machines are situated at some distance from the health department offices; this fact is not necessarily a disadvantage when the records are no longer active, but difficulty is anticipated in mechanising the majority of the records, as they are in constant use by the medical staff. It must also be admitted that no priority can be expected on the machines, as the City Treasurer has commitments that must take precedence over health work. The excellent co-operation of the machine supervisor and her staff has done much to overcome this, but the difficulty will always remain.

Conclusion

It will be appreciated that the Records Officer's work is primarily of an advisory nature, but the difficulties with which such a situation may be fraught have been considerably lessened by the happy spirit of co-operation enjoyed with heads of sections throughout the department. The effect of this has greatly lightened the task of implementing the changes that have already been made.



CITY AND COUNTY OF BRISTOL
EDUCATION COMMITTEE

ANNUAL REPORT

OF THE
SCHOOL MEDICAL OFFICER
R. H. PARRY, M.D., B.S. (Lond.), F.R.C.P., D.P.H.

1950
(FORTY-THIRD YEAR)

INDEX

	PAGE
Artificial sunlight clinic	18
Asthma clinic	17
Aural clinics	9
Cardio-rheumatic clinic	15
Child guidance clinic	10
Chiropody clinic	14
Clinics	4
Co-operation of Parents	7
Dental Clinics	12
Deaf Children	25
Educationally sub-normal Children	21
Employment of Children	30
Enuresis clinic	12
Eye clinics	8
Home visiting	7
Home and Hospital Teacher Service	24
Immunisation	27
Impetigo	8
Infectious diseases	27
Mass Radiography	17
Medical inspection	6
Milk and Meals	28
Nursery Schools and Classes	26
Nurses' Inspections	7
Open Air Schools	23
Orthodontic treatment	13
Orthopaedic and postural defects	14
Orthoptic treatment	9
Partially Sighted Children	25, 36
Physical development in Children	43
Ringworm	7
Scabies	8
School Health Service records	30
Special Schools	21
Speech clinics	19
Spraying in schools	33
Staff	5
Statistical Tables	50
Tonsils and adenoids	9
Transmission of medical information between hospitals and the Authority	32
Treatment	7
Treatment of pre-school Children	27
Uncleanliness	7

BRISTOL EDUCATION COMMITTEE

Chairman - Alderman F. C. WILLIAMS, M.A.

Vice-Chairman - Councillor E. M. YEOMAN

School Health Service Sub-Committee

Chairman - Councillor Mrs. F. M. BROWN

Chief Education Officer

G. H. SYLVESTER, M.A.

School Medical Officer and Medical Officer of Health

R. H. PARRY, M.D., B.S. (London), F.R.C.P., D.P.H.

Chief Assistant School Medical Officer

A. L. SMALLWOOD, M.B., Ch.B., D.C.H., D.P.H.

CITY AND COUNTY OF BRISTOL

Population (estimated December, 1950)	...	...	...	...	442,641
Schools: —					
Number of School Departments	...	...	...	...	190
Average Number on Registers	...	...	...	...	55,398.0
Average Attendance	...	...	...	...	48,927.7

SCHOOL CLINICS

<i>Name of Clinic</i>	<i>Address</i>	<i>Clinics Held</i>
Central Health Clinic.	Tower Hill, Bristol, 2. Tel. 26602	Minor Ailment Inspection and Treatment. Dental Inspection and Treatment. Ophthalmic, Orthopaedic, Aural and Dermatological Consultant Clinics. Chiropody Clinic, Artificial Sunlight Clinic.
Bedminster Health Centre.	Wedmore Vale, Bristol, 3. Tel. 63798	Minor Ailment Inspection and Treatment. Dental Inspection and Treatment. Ophthalmic and Aural Consultant Clinics.
Speedwell Health Centre.	Whitefield Road, Speedwell, Bristol 5. Tel. 73194.	Minor Ailment Inspection and Treatment. Dental Inspection and Treatment. Ophthalmic and Aural Consultant Clinics.
Portway Health Centre	Shirehampton, Bristol. Tel. Avonmouth 90	Minor Ailment Inspection and Treatment. Dental Inspection and Treatment. Ophthalmic and Aural Consultant Clinics.
Southmead Health Centre.	Monks Park Ave., Southmead, Bristol. Tel. 66414.	Minor Ailment Inspection and Treatment. Dental Inspection and Treatment. Ophthalmic and Aural Consultant Clinics.
Brislington Clinic.	Water Lane, Brislington. Tel. 78720.	Minor Ailment Inspection and Treatment.
Knowle Health Centre	Broadfield Road, Bristol, 4. Tel. 76292	Minor Ailment Inspection and Treatment.
Child Guidance Clinic.	7 Brunswick Sq., Bristol, 2. Tel. 26181	
Speech Clinics.	1 Argyle Road, St. Paul's, Bristol, 2. Tel. 26760. and Knowle Health Centre	

CITY AND COUNTY OF BRISTOL

EDUCATION COMMITTEE

Report of the School Medical Officer for the year ended 31st December, 1950

INTRODUCTION

I have pleasure in presenting the annual report on the work of the School Health Service in Bristol during 1950, the forty-third report of the series.

The general standard of health of the school children of the City has been well maintained. The results shown in the assessment of the general condition of the pupils inspected at periodic medical inspection (page 51) indicate that the nutritional standard of the children continues at a good level.

Mr. W. H. B. Stride, the Senior Dental Surgeon, in his report (page 12) has to record the resignation during the year of four full-time dentists. Some part-time assistance is being given, but until further full-time appointments can be made it is impossible to maintain completely the dental service to school children. This problem is of course common throughout the country and it is to be hoped that a solution will soon be found which will enable a complete school dental service to be again provided for all school children of the City.

Towards the end of the year a conference on provision for partially sighted children took place. Representatives of the Ministry of Education took the opportunity of attending this conference, a full report of which is given on page 36.

It is gratifying to be able to record the fact that there were no cases of diphtheria amongst the school children of Bristol in 1950, a tribute to the effect of the scheme for immunisation against this disease (page 27).

During the year discussions have taken place with representatives of the various interests concerned on the arrangements for the referral of cases to hospitals for consultant opinion and the transmission of reports and information. Agreement was finally reached on the details of the scheme and the arrangements are being put into operation (page 32).

With the opening of the new junior mixed school at Novers Lane in August, 1950, provision has been made for two classes for educationally sub-normal children living in the neighbouring area. It is hoped to provide similar special classes in other new schools to be built in other parts of the City.

Considerable attention was given to the system of filing school health records and a complete reorganisation was undertaken during the year (page 30). It may be possible later to introduce some form of mechanisation in the production of statistics which would provide opportunities for research into school health problems and hygiene.

The close co-ordination between the staffs of the School Health Service and the Public Health Service of the City has been fully maintained during the year. It is a pleasure also to record the close co-operation that exists with the consultant staffs of the various hospitals, particularly with the staff of the Children's Hospital.

I should like once more to express my thanks and appreciation to Mr. Sylvester, the Chief Education Officer, and his staff, and to the teachers of Bristol for their ready help and co-operation in all matters relating to the health of the school children of the City.

R. H. PARRY,
School Medical Officer.

STAFF

School Medical Officer and Medical Officer of Health

R. H. PARRY, M.D., B.S. (Lond.), F.R.C.P., D.P.H.

Chief Assistant School Medical Officer

A. L. SMALLWOOD, M.B., Ch.B., D.C.H., D.P.H.

Assistant School Medical Officers

(Joint Appointments with the Local Health Authority)

Mrs. Monica A. Pauli, M.B., Ch.B., Ba.O.
 R. J. Irving Bell, M.R.C.S., L.R.C.P., D.P.H.
 Mary Gibson, M.B., Ch.B., D.P.H.
 A. M. Fraser, L.R.C.P., L.R.C.S., D.P.H.
 B. J. Boulton, M.B., Ch.B.
 Clara Jahoda, M.D. (Vienna)
 Helen M. Gibb, M.B., Ch.B., D.P.H.
 J. E. Krzywiec, Med. Dip. (Warsaw), D.P.H.
 S. W. Terry, M.B., B.S., D.T.M. & H., D.P.H.
 J. L. S. James, M.R.C.S., L.R.C.P. (Anaesthetist.)

Part-time Assistant School Medical Officers

H. F. M. Finzel, M.D., B.S., M.R.C.S., L.R.C.P.
 C. Jean Fraser, M.B., Ch.B., D.P.H.

Consultants—Part-time

Ear, Nose and Throat Clinic	-	-	-	G. R. Scarff, M.B., Ch.B., F.R.C.S.(E).
				H. D. Fairman, F.R.C.S.
Orthopaedic Clinic	-	-	-	K. H. Pridie, M.B., B.S., F.R.C.S.
				D. M. Jones, M.B., B.S., F.R.C.S., M.Ch.(Orth.)
Ophthalmic Clinic	-	-	-	R. R. Garden, M.A., M.B., D.O.M.S., D.P.H.
Cardio-rheumatic Clinic	-	-	-	C. Bruce Perry, M.D., Ch.B., F.R.C.P.
Dermatological Clinic	-	-	-	R. P. Warin, M.D., M.R.C.P.
				C. D. Evans, B.A., M.B., B.Ch. (Camb.)
Chiropody Clinic	-	-	-	L. I. W. Tasker, M.Ch.S.

Dental Surgeons

Senior Dental Officer	-	-	-	W. H. B. Stride, L.D.S.
Dental Officers	-	-	-	A. L. Morgan, L.D.S.
				Mrs. Marion Bentz, L.D.S.
				A. H. V. Williams, L.D.S.
				H. W. Williams, L.D.S.
				Alice M. Trump, L.D.S.
				G. W. Vowles, L.D.S. (part-time)
				H. Hazell, L.D.S. (part-time)

(There are four vacancies on the dental staff)

Oral Hygienist	-	-	-	Miss G. Luck
----------------	---	---	---	--------------

Child Guidance Clinic

Director	-	-	-	R. F. Barbour, M.A., F.R.C.P., D.P.M.
Assistant Psychiatrist	-	-	-	Mrs. Doris E. Heron, M.R.C.S., L.R.C.P.
Senior Psychologist	-	-	-	Mary T. McBride, M.A., Ed.B.
Psychologists	-	-	-	R. Good, B.A.
				Elsie A. W. Hepburn, M.A., Ed.B.
				C. J. Beedell, B.Sc.
Senior Psychiatric Social Worker	-	-	-	Mrs. L. Gatliff
Psychiatric Social Worker	-	-	-	Mrs. Joan D. Scrine

Speech Clinic

Speech Therapists	-	-	-	Kathleen Coleman, L.C.S.T.
				Dorothy Glover, L.C.S.T.

Nursing Service

Matron	-	-	-	Miss L. M. Bendall, S.R.N., S.C.M., H.V.Cert.
Assistant Matron	-	-	-	Miss V. P. Bowler, S.R.N., S.C.M., H.V.Cert.

STAFF

The following staff changes took place during the year : —

Medical.

Dr. J. E. Krzywiec, Med. Dip. (Warsaw), D.P.H., was appointed as Assistant Medical Officer of Health and School Medical Officer on 13th February, 1950, to fill the vacancy created by the resignation of Dr. D. M. Jones on 31st October, 1949. Dr. W. L. Walker resigned his appointment on 20th April, 1950, and was replaced on 19th June, 1950, by Dr. S. W. Terry, M.B., B.S., D.P.H.

Mr. H. D. Fairman, F.R.C.S., was appointed as part-time ear, nose and throat consultant in September, 1950.

Dental.

The following resignations of dental surgeons took place during the year : —

Mr. G. G. Davis, L.D.S., 28th February, 1950.

Mr. G. W. Vowles, L.D.S., 28th April, 1950.

Mr. H. Hazell, L.D.S., 15th July, 1950.

Mr. E. R. Dowland, L.D.S., 30th September, 1950.

Mr. Vowles continued to give five sessions per week and Mr. Hazell three sessions per week to school dental work.

Miss G. Luck was appointed as oral hygienist on 25th September, 1950.

Child Guidance Clinic.

Miss M. R. Hall resigned her appointment as psychiatric social worker on 28th February, 1950, and was succeeded by Mrs. J. D. Scrine on 8th May, 1950.

Miss D. J. Binning, B.A., psychiatric social worker, resigned on 12th August, 1950, and Mrs. L. Gatliff was appointed in her place on 1st November, 1950.

Mr. C. J. Beedell, B.Sc., was appointed as assistant educational psychologist on 1st October, 1950.

Speech Clinic.

Miss D. Glover, L.C.S.T., was appointed as speech therapist on 8th August, 1950, to succeed Miss W. E. Cooke, L.C.S.T.

MEDICAL INSPECTION

A complete medical inspection was made during the year of 17,878 children attending the Committee's primary and secondary schools. The tables relating to these examinations will be found in the statistical section at the end of this report.

Co-operation of Parents.

The number of parents present at primary and secondary school medical inspections was as follows : —

				No. Examined	Parents Present	Per cent.
Entrants ...	...	...	...	7,383	6,746	91.37
Second Age Group	...	...	...	5,031	3,369	66.96
Third Age Group	...	...	...	4,057	1,170	28.83
Total				16,471	11,285	68.50

NURSES' INSPECTIONS AND UNCLEANLINESS

The number of visits to schools made by the nursing staff during the year for the purpose of examining children at survey visits and cleanliness inspections was 2,733 compared with 2,708 in 1949, 123,039 examinations (including 1,145 re-examinations) having been made. The number of individual children found with verminous conditions during the year was 3,027. The treatment and cleansing of children found to have varying degrees of verminous conditions or infestation was continued in all the clinics during the year, 964 individual children being treated and 5,746 attendances being made. Treatment by means of a D.D.T. Emulsion was used throughout the year. Most of the cases found were not severe but there is always the problem of the comparatively small number of families where the children have constantly to receive attention and who probably form the main source of the infestation.

The close co-operation between the nurses and the Heads of schools was maintained during the year and the valuable assistance given by teachers and the staff of the Child Welfare Department in dealing with this problem is greatly appreciated.

Home Visiting.

During the year the number of visits for the purpose of "following up" defects, etc., was 2,628. Other visits in regard to uncleanness, etc., totalled 1,107.

TREATMENT

The total number of attendances at the clinics during the year was 245,197.

Skin Clinics.

Scalp Ringworm.

157 cases of scalp ringworm were dealt with during the year, 129 by X-Ray—28 by other means.

The cases treated by X-Rays during the year were as follows : —

				1950
Primary and Secondary Schools	...	...	...	127
Nursery Schools	...	...	...	2
Total				129

X-Ray Treatment of Ringworm.

Dr. R. P. Warin, Consultant Dermatologist, Bristol Royal Hospital, reports:—

“The arrangements commenced in 1949, whereby cases of scalp ringworm are treated at the special clinic held at the General Hospital, were continued during the year. Cases are referred to this clinic by G.Ps. or by School Medical Officers. There is little change in the incidence of animal small spore ringworm compared with human small spore type.

Most cases are treated by X-Ray epilation. Local applications are successful in only a small number of cases and the length of treatment is often greater than with X-Ray epilation. It has been a very great help to have Dr. A. M. Fraser, Assistant School Medical Officer, attending the clinic regularly, as we have thus had close liaison with the School Health Service, and he has also been able to deal with the epidemiological aspects. There certainly has been an increase in the number of cases of ringworm of the scalp referred to the clinic, although I think that this was chiefly in the earlier part of the year.”

Body Ringworm.

During 1950, 291 cases of this disease amongst school children were treated at the school clinics. This compares with 181 cases in 1949.

Impetigo.

The school clinics treated 470 cases of impetigo during the year.

Scabies.

The following table shows the number of scabies cases treated in 1950 and the three preceding years.

Year	School Cases	Cases under school age	Adults	
			Women	Men
1947	789	305	621	420
1948	462	148	292	191
1949	224	100	133	94
1950	211	89	93	68

Eye Clinics.

Mr. R. R. Garden, Consultant Ophthalmic Surgeon, reports as follows:—

“There was a considerable increase in the number of refractions completed at the clinics in 1950. The total of 5,632 included 5,598 cases referred from Primary, Secondary and Special schools and 34 from Nursery schools. Of these, 853 did not require glasses, although in some instances they were retained on a list for observation.

During the year, 588 refraction sessions were held, spectacles were prescribed for 2,258 children (including 11 from nursery schools) and 1,740 (including 8 from nursery schools) were supplied with them by the end of the period. The time of waiting for glasses has fortunately been steadily reduced, and is now reasonably short.

The number of attendances at clinics for the treatment of external eye diseases was 5,076.

The examination and treatment of squint cases in children occupies a considerable amount of time ; 191 new cases and 902 under observation from previous sessions attended during the year. Of the new cases, the Maternity and Child Welfare Department referred 73, and nursery schools sent 6, as a result of medical inspections.

At the Eye Hospital, the Orthoptic Clinic continues to do useful work, especially in the pre- and post-operative testing and treatment of children admitted for the surgical correction of strabismus. A total of 73 operations of this kind took place at the Bristol Eye Hospital, during the twelve months, on children living in the city.

During the autumn, a detailed survey of all children in the partially sighted category was carried out, with results which are recorded elsewhere in this Report."

Defects of Nose and Throat.

The number of children found suffering from the above ailments was 1,949 of whom 436 (including 3 nursery school children) received non-operative treatment at the Committee's clinics. Operative treatment for enlarged tonsils and adenoids at the various Bristol hospitals was given in 945 cases.

Aural Clinics.

Mr. G. R. Scarff, Consultant Ear, Nose and Throat surgeon, reports :—

"During the year the number of children suffering from aural defects attending the clinic was 337 (including 8 pre-school cases and 18 nursery school cases). Out of a total of 306 new cases of middle ear suppuration found at school medical inspection, 148 failed to clear up with a few weeks' routine treatment at the minor ailment clinic and were therefore referred to the aural clinic. Only 26 of these cases were still attending at the end of the year.

There were 893 children, including 77 nursery school children and 6 infants from the Maternity and Child Welfare Department, referred for diagnosis of nose and throat conditions. Of these, 378 were advised operative treatment for infected tonsils and adenoids and 141 advised operative treatment for other ear, nose and throat conditions.

The waiting lists at the hospitals for patients requiring operative treatment were being brought down to a reasonable level until the epidemic of anterior poliomyelitis caused a cessation of all nose and throat operations for three months, which has again increased the time of waiting. As this interruption of the normal operating routine appears likely to recur annually, an endeavour is being made to make extra beds available for these cases during the remaining period."

Child Guidance Clinic.

Dr. R. F. Barbour, the Director, reports:—

"During the year 308 cases were registered." Details of the work of the clinic during the year are as follows:—

Psychiatric.

Diagnostic interviews	...	...	...	308
Physical examinations	...	...	...	299
Treatment interviews	...	...	...	1,422
Parents interviewed	...	...	...	83
Others interviewed	...	...	...	31

Psychological.

Examinations, including Juvenile Court cases	...	...	...	424
Treatment interviews	...	...	...	740
Parents interviewed	...	...	...	87
Others interviewed	...	...	...	18
Other visits	...	...	...	56

Social.

Interviews with Parents	...	...	...	1,779
Interviews with others	...	...	...	43
Home visits	...	...	...	77
Other visits	...	...	...	14

Staff. In October, 1950, a fourth psychologist, Mr. Christopher J. Beedell, B.Sc., was appointed. Both psychiatric social workers, Miss Dorothy Binning and Miss Marion Hall, left in order to get married and their places were taken by Mrs. Joan Scrine (May, 1950) and Mrs. Lois Gatliff (November, 1950); the latter was appointed Senior Psychiatric Social Worker with special emoluments for a post of responsibility. The shortage of psychiatric staff continues, and as a small step towards eliminating this, arrangements have been made, through the co-operation of Dr. Smallwood, for a school medical officer to be seconded to the Clinic for three sessions per week. Post-graduate students in psychological medicine also attend for three sessions per week in order to obtain the experience in Child Guidance that is required for the Diploma in Psychological Medicine.

The Clinic, since its opening in 1936, has now seen, 5,124 cases.

A Hostel for Maladjusted Boys has long been the aim of the Bristol Education Committee. Various premises were looked at and finally accommodation was secured at Claremont House, Park Grove, Henleaze, the hostel opening on 22nd April, 1950. The Warden and Matron are Mr. and Mrs. E. I. Gilpin. The establishment consists also of a deputy-warden, an assistant matron, a resident cook, one full-time and two part-time domestic cleaners and a full-time gardener. The Hostel is in a three-storey house with three acres of ground adjoining and with permission to use the Education Committee's playing field, which is adjacent. The Hostel will eventually be able to accommodate twenty-five boys. The ground floor is at present used for primary school purposes until the school which is being built on the adjoining property is completed, so that at present only fourteen boys can be accommodated. The Hostel is intended primarily for boys between the ages of eight and twelve years who would benefit from a stay of about six months. They attend one of the two council schools in the district.

Miss McBride, the Senior Educational Psychologist, reporting on the work of the psychologists outside the Clinic, says that—"In addition to the cases seen at the Child Guidance Clinic, 505 children have been seen by the psychologists only, most of these in their own schools. Some have been seen two or three times, and in a number of cases one of the parents has been interviewed. When advisable, the child has been brought to the Clinic for examination by the full team.

The addition of a fourth psychologist to the staff in October will make more intensive work possible. It has also allowed a zoning of the schools, allocating one psychologist to each area, and thus it is hoped to strengthen still further the already very good co-operation existing between the schools, the Clinic, and the parents.

There has been the usual interesting diversity of work during 1950. During the year in conjunction with the School Medical Officer, a survey of schools has been carried out in the Knowle West area prior to the opening of Novers Lane School with its two classes for educationally subnormal children.

These classes have been a welcome addition to the City's provision for handicapped children, as has Claremont Hostel for Maladjusted Boys, which is visited weekly by a psychologist, who also forms a link between the Hostel and the schools attended by the boys.

We have also continued to have the generous services of Mrs. A. M. Weir, who had voluntarily given remedial treatment on two afternoons weekly to children suffering from specific educational problems.

One of the most interesting parts of the psychologist's duties is the assessment and examination of doubly-handicapped children—deaf or blind children who have in addition educational or behaviour problems; cerebral palsy cases, possible aphasics, epileptics—some attending maintained, others non-maintained schools, and some not in attendance at any school. Perhaps the biggest problem is presented by the cerebral-palsied child whose physical limitations may prevent the expressing of his ability, and whose physical and mental limitations are almost invariably accompanied by emotional problems. It is usually more satisfactory to see the cerebral-palsied child in his own home, where the security of familiar surroundings lessens the strain of the test situation.

This year, perhaps even more than in previous years, the psychologists have been in frequent demand for lectures, talks and discussions to Parent-Teacher and Mothers' groups, to training and refresher courses for teachers, probation officers, youth leaders, health visitors, district nurses, etc., as well as for adult education classes organised by the University and Workers' Educational Association.

Perhaps the most noticeable and encouraging feature of our work has been the close co-operation between the school medical and educational services, and the many departments and organisations interested in the welfare of children and young people."

Enuresis Clinic.

This clinic is now conducted by Dr. J. E. Krzywiec and Dr. S. W. Terry who report:—

" During 1950, 165 children attended the Enuresis Clinic. Of that number, 4 were discharged as cured; 22 failed to attend and were dropped (6 of them were showing marked improvement and in the 16 others there was little or no improvement); 3 left school and 2 children were transferred to the Child Guidance Clinic for treatment.

The remaining 134 children are still attending the Enuresis Clinic; 52 of them show improvement and can be grouped as follows:—

(a) symptom free and under control	15
(b) marked improvement but occasionally wet ...	13
(c) some permanent improvement	24

There is a group of 36 children who show no improvement at all. It is difficult to assess why they have not improved, but it is perhaps of some significance that the children of this group very often come from poor, overcrowded homes where several children may sleep in one bedroom and often in one bed. To this group also belong children whose parents do not co-operate well and fail to follow instructions, but expect a "bottle of medicine" to cure the trouble. Very often these parents are convinced that the child is lazy and try all kinds of "homely methods" to teach him clean habits.

There are also some children of lower intelligence in this group whose response to treatment is practically negligible.

There are 17 children who do not attend clinic regularly, 6 of them show improvement, but in the other 11 cases the condition remains unchanged.

Twenty-five of the children are new patients who have had only a few appointments and it is yet too early to conclude whether there has been a permanent improvement or any at all.

Two children presented a serious psychological problem and are at present under investigation at the Child Guidance Clinic, and 2 others had concurrent physical disabilities and were sent to the Children's Hospital for full investigation.

At the time of writing this report there is a waiting list of 38 patients."

Dental Clinics.

Mr. W. H. B. Stride, Senior Dental Officer, reports:—

" Since the beginning of the year the dental staff has been reduced to 6 whole-time dental officers, first by the loss of Mr. Davis to Bath Local Authority on 28th February, 1950, later by the resignation of Mr. Vowles on 30th April, 1950, and Mr. Dowland on 30th September, 1950, who went into private practice, and the transfer to the Regional Hospital Board of Mr. Hazell on 20th August, 1950. For the present, however, Mr. Vowles is giving five sessions per week to school

dental work, and the Regional Hospital Board are allowing three sessions a week of Mr. Hazell's time to continue to be given to the Local Authority's service, at any rate for the time being.

The total number of part-time sessions is made up to 9 per week by an additional weekly session given by a private practitioner.

The number of primary, secondary and special school children inspected during the year was 38,536, compared with 44,486 in 1949, and the number treated was 22,834, compared with 25,534. In addition, 1,070 nursery school children have been inspected and 340 have received treatment.

The school population is now 55,398 and, as each year the numbers increase, the problem of inspection becomes even more formidable in view of the reduced staff. Every effort will be made to inspect as many children as possible, but the total number seen must depend on the amount of urgent work found at inspections and the amount of work from all services coming up to the Clinics.

At the request of the Ministry the Committee agreed to take part in the 'Investigation into the effect of the local application of Fluoride on dental caries.' Charts have been made of the mouths of the selected children and this treatment will be carried out year by year during the course of the investigation.

On the suggestion of the Ministry of Health an oral hygienist was engaged to carry out scalings and polishings and to give instruction in oral hygiene; Miss G. Luck was appointed to this post on 25th September, 1950. By agreement with the Ministry, Miss Luck is also giving applications of sodium fluoride to those children being treated as part of the investigation which is at present being carried out on the effect of applications of sodium fluoride in preventing dental decay. Since September, 50 mothers and 181 children have received scalings and polishings and instruction in oral hygiene. Not only does this work show every sign of being very much appreciated by the parents, but in view of the large amount of time which is consumed in any long course of scalings it will be of great value.

The arrangements commenced in October, 1947, whereby a number of Bristol school children are inspected and treated by the Department of Children's Dentistry of the Bristol Dental Hospital, were continued during the year. The figures relating to the children dealt with in 1950 are as follows:—

UNIVERSITY OF BRISTOL					1950
<i>Department of Children's Dentistry, Bristol Dental Hospital.</i>					
Number of cases inspected	...	...	...	1,049
Number needing treatment	...	...	...	937
Number of new cases treated	...	...	...	572
Others treated	...	...	...	402
Total attendances	...	...	...	980

Orthodontic Diagnostic Clinic.

Since 5th July, 1948, the treatment of all orthodontic cases has been undertaken by the Bristol Dental Hospital. A full-time Orthodontist

has been appointed by the Hospital and attends a diagnostic session at the Central Health Clinic each week. Cases needing fixed or removable appliances are referred to the Dental Hospital for treatment. This diagnostic session is proving of the greatest value, as in so many cases it is necessary that the children should be seen at an early stage when the tendency to abnormality is first noted. This session is well attended and cases can be seen very quickly for diagnosis.

Details of the cases seen at the Diagnostic Clinic are as follows :—

New patients	...	...	...	...	498
Attendances	...	...	...	...	731
Referred to Dental Hospital	...	...	...	...	340
Completed	...	...	...	...	70

Mr. Trevor Johnson, L.D.S., reports :—

" At the end of the year there were 651 cases under treatment at the Dental Hospital and a high standard of treatment is being maintained. Altogether 413 new cases were seen during the year. The arrangements continue to operate satisfactorily, although the waiting time has increased."

Orthopaedic and Postural Defects.

The clinics for children suffering from orthopaedic and postural defects have been continued throughout the year under the Consultant Orthopaedic Surgeons, Mr. K. H. Pridie and Mr. D. M. Jones. Massage, remedial exercises and sunlight treatment, etc., where recommended, are given by the Authority's Physiotherapists.

The number of children seen at the clinic was somewhat smaller than in 1949, both for school children and for children under five years of age. The following table gives details of the children seen during the year :—

			Age 5 years and over	Age under 5 years
Paralysis (a) Flaccid	...	...	46	23
(b) Spastic	...	...	48	19
Tuberculosis of Bones and Joints	...	...	9	2
Congenital abnormalities of Bones and Joints	...	...	44	17
Amputations	...	...	10	—
Rickets	...	...	—	3
Genu Valgum	...	...	39	47
Various (flat foot, spinal curvature, etc.)	...	...	657	131
			<hr/> 853	<hr/> 242

Chiropody Clinic.

Mr. L. Tasker, the Committee's Chiropodist, reports :—

" There was a slight reduction in the number of attendances compared with 1949, the figures being, 3,269 treatments against 3,290 and the number of new cases seen was 656 against 786. Of the new cases, 533 were from Primary Schools, 107 from Secondary and Grammar Schools, 7 from Nursery Schools and 9 from the M. & C.W. Department.

Plantar warts accounted for 442 of the new cases, a reduction of 70 on the previous year, while other groups remain fairly constant.

During the year some 30 cases were referred to the Orthopaedic Department for operation or physiotherapy."

The following is a summary of treatments given during 1950:—

	1st	Other
Metatarsalgia	9	21
Hammer Toes	18	77
Plantar Warts	442	2,259
Pes Cavus	4	6
Foot Strains	46	66
Hallux Valgus and Rigidus	13	21
Miscellaneous	108	132
	<hr/> 640	<hr/> 2,582

Cardio-Rheumatic Clinic.

Professor C. Bruce Perry reports:—

"The work of the Cardio-Rheumatic Clinic has continued on the same lines as previously.

There has been a further decrease in the number of new cases of acute rheumatism. This fall in the incidence of the disease is also shown by the fairly small number of notified cases of acute rheumatism received this year. During 1950 only thirty-two cases were notified, and not all of these on further investigation proved to be, in fact, cases of acute rheumatism. This diminishing incidence in the disease is not, of course, a new phenomenon, but has been taking place during the past 20 or 25 years. Without more knowledge of the cause of acute rheumatism we cannot be sure of the cause of this diminishing incidence. It may be due to the fall in the severity of streptococcal infection in general, or may be due to the general increase in the standard of living, but it must remain for the moment a matter of speculation."

**Summary of cases attending CARDIO-RHEUMATIC CLINIC, 1950, including Primary, Secondary, Grammar
and Nursery Schools**

	No treatment or restriction	No treatment but restriction of games, etc.	Treatment and school	Treatment and exclude from school	Institutional treatment	TOTAL
NEW CASES.						
Rheumatic Heart Disease ...	5	1	—	—	7	13
Chorea ...	1	—	—	—	1	2
No Organic Disease ...	59	—	—	—	2	61
Congenital Heart Disease ...	11	—	—	1	1	13
Various ...	6	—	—	1	—	7
	82	1	—	2	11	96
RE-EXAMINATIONS.						
Rheumatic Heart Disease ...	397	38	6	2	4	447
Chorea ...	42	—	2	3	2	49
No Organic Disease ...	384	2	1	—	5	392
Congenital Heart Disease ...	84	14	2	—	3	103
Various ...	80	—	1	1	1	83
	987	54	12	6	15	1,074

No. of Individual children examined	...	628
No. of New cases for 1950	...	96
No. of Re-examinations	...	1,074
TOTAL NUMBER OF ATTENDANCES	...	1,170

Asthma Clinic.

Dr. R. J. Irving-Bell reports : —

" Attendances at this clinic on Wednesday afternoons during 1950 have been maintained at a fairly good level, though a significant sign, during the latter half of the year, has been a marked falling off in the number of new cases.

The general practitioner is clearly dealing with the family to an increasing degree, and, apart from speech defects and mental sub-normality, has been treating all the disabilities of childhood.

Since the resignation of Miss Wilson, the clinic has been deprived of a useful form of treatment for asthma in the form of relaxation therapy. If this clinic is to continue to deal with these cases as a special clinic, some provision for relaxation therapy should be made, as this kind of treatment is invaluable for the majority of asthmatics."

Mass Radiography.

Dr. E. E. Mawson, reports : —

" The arrangements for the mass radiography of children due to leave school were continued during the year and 5,763 children were X-Rayed. The details of the cases are given below."

<i>Summary</i>	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Miniature Films	2,793	2,970	5,763
Recalled for large films	135	114	249
Normal large films	94	69	163
Did not attend	2	3	5
Significant cases	39	42	81

Analysis of Significant Cases.

Of the significant cases, 29 were found on clinical examination to have non-tuberculous conditions as set out below : —

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Abnormality bony thorax ...	3	5	8
Bronchitis and Emphysema ...	—	—	—
Bronchiectasis	4	3	7
Pleural thickening	4	—	4
Congenital Cardiac Lesion ...	1	—	1
Acquired Cardiac Lesion ...	—	3	3
Rheumatic carditis	1	—	1
Dextrocardia	1	—	1
Pneumonia	—	—	—
Basal Fibrosis	1	1	2
Old empyema	1	—	1
Goitre	—	1	1
Total ...	16	13	29

The remaining 52 cases were found to have varying degrees of tuberculous conditions and were dealt with as follows :—

	Boys	Girls	Total	Disposal			
				N.A.	Dr.	Disp.	San.
<i>Active</i>							
Active Primary lesions ...	1	1	2	—	—	2	—
Post-primary unilateral ...	3	7	10	—	—	4	6
Post-primary bilateral ...	—	1	1	—	—	1	—
Tuberculous pleural effusion	2	—	2	—	—	2	—
<i>Inactive</i>							
Inactive Primary lesion ...	8	11	19	14	1	4	—
Inactive Post-primary lesion ...	4	3	7	3	1	3	—
Total ...	18	23	41	17	2	16	6
Not classified ...	5	6	11				

Complete surveys were carried out during the year at three schools because the School Medical Officers had reported that symptoms of tuberculosis had been found in one or more scholars. The mobile mass X-ray unit visited two of these schools, and scholars and staff from the third school visited the Central Health Clinic.

The findings in one of the schools, a junior mixed school, illustrate the advantages of such surveys. In the case of this school the School Medical Officer had found two cases of pulmonary tuberculosis. The results of the mass radiography survey demonstrated two more cases which were completely without signs or symptoms. It was also found that a young teacher at this school, whose X-ray had been normal a year previously, had active pulmonary tuberculosis. She went off duty immediately and was placed under treatment.

Artificial Sunlight Clinic.

During 1950, 424 children of school age and 48 children at nursery schools were given a complete course of artificial sunlight treatment. Details of the cases are given below :—

Defect	Prim. Secy. and Gram. Schools			Nursery Schools		
	No. Treated	Im-proved	Station-ary	No. Treated	Im-proved	Station-ary
General Debility ...	107	73	34	17	15	2
Bronchitis-mod. ...	31	28	3	4	3	1
Bronchitis-slight ...	16	13	3	1	1	—
Enlarged glands ...	21	15	6	1	—	1
Malnutrition ...	7	4	3	8	6	2
Miscellaneous ...	242	187	55	17	15	2
Total ...	424	320	104	48	40	8

Speech Clinics.

Northern Area.

Miss D. M. Glover, L.C.S.T., reports :—

"The Speech Clinic for the Northern Area was re-opened during August Bank Holiday week when I took up duty on the 8th August. At the commencement a very small number of cases were attending for treatment.

Immediately the schools re-opened for the Autumn Term a series of school visits was arranged and this revealed many cases requiring treatment. These were given an early appointment to be seen by Dr. Irving-Bell at his inspection clinic, and treatment was commenced in those cases recommended by him.

Attendances on the whole have been good. In order to facilitate the treatment of children living in the Southmead area, two speech therapy sessions each week were commenced at the Southmead Health Centre."

The following is a summary of treatments :—

NEW CASES	...	...	...	...	48
From Miss Cooke	...	...	...	...	7
From Miss Coleman	...	...	...	...	7
					<hr/> 62
Cases in attendance at end of year	...	...	...	...	54
Cases discharged with normal speech	...	...	...	...	2
Defaulted	...	...	...	...	5
Suspended	...	...	...	...	1
					<hr/> 62
ANALYSIS					
Dyslalia	...	...	...	...	26
Stammer	...	...	...	...	20
Sigmatism	...	...	...	...	4
Cleft Palate	...	...	...	...	4
					<hr/> 54
School visits	...	...	...	...	49
Total attendances	...	...	...	...	<hr/>608

Southern Area.

Miss V. J. K. Coleman, L.C.S.T., reports :—

"The character of the work of the clinic has undergone a change during the year. Whereas previously, the greater number of children attending the clinic were dyslalic children under ten years of age, now the greater number of those attending are stammerers over ten years of age, of which an unusually large percentage are girls.

Several dyslalic children have been admitted and discharged within the year, and several stammerers have so far overcome their disability as to be now able to manage on their own, calling on the clinic only when they feel the need. Those receiving regular treatment are attending more frequently and for longer periods, the longer periods

being much appreciated by the children and yielding some rewarding results.

The playroom at Argyle Road Clinic is becoming well equipped and affords a satisfying outlet to children of all ages.

Treatment sessions at Knowle and Bedminster clinics were continued throughout the year for the children living in these areas of the city.

Statistics :

(a)	Number in attendance, December, 1949 ...	...	83
(b)	Number of cases admitted during 1950 ...	...	35
(c)	Number of cases discharged ...	...	47
(d)	Number of cases transferred to Northern Area ...	...	7
(e)	Number in attendance, December, 1950 ...	...	64
(f)	Total number of attendances during the year ...	...	2,518

Types of cases.

Stammering	...	...	...	26
Dyslalia ...	...	...	...	27
Idioglossia	...	...	...	3
Aphasia ...	...	...	...	2
Cleft Palate	...	...	...	4
Dysphonia	...	...	...	2
				<hr/> 64 <hr/>

There have again been many visitors to the clinics, including post-graduates, student health visitors and student teachers.

Little work has been done this year in connection with the Burden Institute, but some helpful and tangible suggestions have been received from therapists engaged on research with stammerers, and it is hoped that it will be possible to work on these in 1951.

Schools have again been very co-operative, and their help is much appreciated.

The following cases under treatment in the clinics may be of interest: —

B.H. suffered from a stammer so severe that he refrained from speech and had not spoken for two years at a senior boys' school. After working daily in the holidays and thrice weekly in school time he has now reached the stage when it has been possible to work on and correct a speech fault. His form master is now able to test what he has learned, which was never previously possible. At his own request he has started to learn to read, receiving help both at the clinic and in school.

David. An exceptionally intelligent boy who came to the clinic with a severe idioglossia which was quite unintelligible. Within three months he had responded so well to treatment as to produce slow, well spoken English at all times, easily intelligible to everybody.

Violet, age 8, after progressing well with treatment for a dyslalia, came to clinic one day refusing to speak. She had been away with a septic knee for three weeks, followed by a bite from an Alsatian dog. Her mother reported that she could not speak for several days, but she recovered and went back to school apparently well. Two days afterwards she got up in the morning stating that she wanted to go away from the

family and live on her own, after which she refrained from speaking except in monosyllables. Work on speech was obviously out of the question, but Violet was invited to come and play at Argyle Road clinic. This she consented to do, and two whole months passed without her uttering a word. A month later she was speaking at clinic, and a month after that was speaking outside home. Now she appears to be completely happy and has attained almost normal speech."

Dr. R. J. Irving-Bell, reports : —

" Since September, 1950, the speech clinic inspection session, held weekly at the Central Clinic, has been transferred to the Speech Clinic Centre at 1 Argyle Road. This has resulted in improved co-operation, and better administration with the speech therapists, as, during the medical examination of the new cases by the medical officer to eliminate any physical defects possibly causing the speech disability, the speech therapist attends and is consulted about the best line of treatment to be adopted. On the administrative side it also saves the transfer of the speech clinic record cards to the speech therapist.

Miss Coleman dealt satisfactorily with all the cases of speech defect and stammering until the latter half of the year, when we were fortunate in acquiring the services of Miss D. Glover as additional speech therapist. Miss Glover undertakes the treatment of school children in schools to the north of the city, and has recently established a speech treatment centre at Southmead clinic for the large number of children living in that district."

SPECIAL SCHOOLS

Schools for Educationally Sub-normal Children.

Day Special Schools.

The three day schools for educationally sub-normal children (Senior Boys 140, Senior Girls 100 and Junior Mixed 80) were full to capacity throughout the year, and there were waiting lists at all three schools. The pressure, however, is particularly heavy for the junior school. Two classes for educationally sub-normal children were provided at the new Novers Lane Primary School when this was opened in August, 1950. These provided additional accommodation for forty educationally sub-normal junior children living in the neighbourhood, and this has to a considerable extent eased the pressure on the Newfoundland Road Special School.

Residential special schools for educationally sub-normal children.

The Authority's two residential schools for educationally sub-normal children (Kingsdon Manor 40 boys, and Croydon Hall 40 girls) were open throughout the year. The demand for places at the senior boys' school continues to be heavy, but at the senior girls' school at Croydon Hall it has been possible to offer a small number of places to other Authorities.

The number of children on the registers of the day and residential special schools at the end of the year was as follows:—

	Boys	Girls	Total
Russell Town Day Special School, Bristol ...	146	—	146
Rose Green Day Special School, Bristol ...	—	108	108
Newfoundland Road Day Special School, Bristol	56	27	83
Croydon Hall Residential School, Wachte ... (including 11 from other authorities)	—	34	34
Kingsdon Manor Residential School, Kingsdon ... (including 1 from another authority)	42	—	42

The following note has been supplied by the Youth Employment Department concerning its work for handicapped boys and girls.

All the boys and girls leaving the Special Schools have been interviewed and given vocational guidance. The following plan has been adopted.

The vocational guidance talk has been given at the beginning of the last term during which the boys and girls are at the Special Schools. This talk is given in general terms and is aimed at bringing the Youth Employment Service to their notice and telling them what it can do for them. Later in the term the Youth Employment Officer concerned attended the Special Schools Case Conference where the general progress and the prospects of the educationally sub-normal pupils are reviewed by the School Medical Officer, Mental Health Officer and other persons concerned. The information obtained at this Conference as to the physical, mental and emotional state of these boys and girls has been exceedingly helpful in finding suitable employment for these young people.

Very few of the educationally sub-normal pupils have found their own work. The girls have been placed mainly with the large printing firms while some have gone into chocolate factories, the sewing trades and other smaller factories. Girls have been placed largely in accordance with their own wishes, as there is always plenty of suitable work available; one girl even obtained a post as a nursery helper.

The boys have had less choice than the girls, as there are not so many openings for them available and suitable jobs have to be earmarked for certain boys as they come in. The majority of boys go in warehouse, factory or delivery work, and one boy was placed with the Parks Department in the spring.

The majority of girls have remained in their jobs and few have proved to be serious problems. Some boys have lost or left their jobs in a short space of time and a few have had several jobs in the space of a few months. These are usually boys who have some physical handicap as well.

In the future a more direct supervision of the welfare of handicapped boys and girls after leaving school will be possible by the appointment by the Education Committee of a Special Schools After-Care Officer to the Youth Employment Department. This Officer will

visit at regular intervals the homes of boys and girls who have attended special schools or who are known to be handicapped. These will include the educationally sub-normal, the partially sighted and the physically handicapped—the blind and the deaf have already a service which looks after their welfare—and certain other handicapped boys and girls.

The heaviest responsibility in this service will be the educationally sub-normal. At present there is statutory supervision by the Mental Welfare Department of the Health Service for those for whom such supervision is deemed necessary, but there are many others whose mental level does not require this supervision but who will certainly be aided by a friendly visitor coming round every few months to see how they are getting along in work and in their life in general.

OPEN AIR SCHOOLS

Dr. B. J. Boulton, reports :—

Periton Mead Residential Open Air School, Minehead.

“ The School is now firmly established in its new home, Periton Mead House, which has been found to be well suited for its use as a Residential Open Air School. The premises are attractive, the gardens, lawns and terraces are bright, open and sunny. While the town of Minehead with its beach is near at hand, the country around the house in other directions provides every opportunity for outdoor activity which is so popular with children who have spent most of their lives in a large city.

Now that work on the present premises has been completed, accommodation has been provided for 34 children. It is probable that this number will soon be increased to 40 when a cottage attached to the house becomes available.

There is a short waiting list at present, but suitable cases can be admitted with little delay. The average period of residence remains at six months, a period which has been found to give generally satisfactory results.

It has been recognised for some time that the accommodation should be increased to 60 places as soon as possible, realising that more children would benefit either by a short or long term stay in such a place as this.

Also it is recognised that it seems rather illogical to close the school in the best month of the year and it is hoped that arrangements will be possible in future to keep the school open in the summer months so that children may be able to stay for anything from one to six months, depending on their needs.

South Bristol Day Open Air School.

(a) Delicate Children.

This department of the school has been full during the year and there is a fairly long waiting list. Children in the age group 6-10 years form the majority of those waiting for admission. Cases of asthma

continue to form a high percentage of the applications and a large number are passed on to us each year by the Bristol Children's Hospital. Requests for re-admission are not infrequent. The average period of stay at the school remains at one to two years. The disadvantages of too short a period of treatment are obvious. The disadvantages of too long a period of attendance become apparent in the difficulty which some children find in settling down again in ordinary schools. Whenever possible, backward children are retained at the Open Air School until they can be directly transferred to schools where they may obtain special educational treatment.

(b) Physically Handicapped Children.

In the report for 1949, it was noted that there had been a falling off in the admissions of children of this group. This appears to have been a temporary phase. During the year a number of severely handicapped children have been admitted. The lay helpers find plenty to do in helping them to move from one part of the school to another. The recent poliomyelitis epidemic will doubtless influence the demand for places during the next few years.

Transport of pupils from their homes has given rise to some difficulty from time to time during the year. Owing to the longer journeys involved due to the city's expansion, the coaches commence picking up pupils at 8 o'clock in the morning. Parents of some of the younger children occasionally find this rather inconvenient but, generally speaking, they co-operate reasonably well. Certain areas of the city, however, are not covered by the existing transport arrangements and several children, very suitable on medical grounds, have been unable to attend the school because the nearest picking-up point was too far from their homes."

The number of children on the registers at the end of the year is as follows :—

	Boys	Girls	Total
Delicate children	32	28	60
Physically-defective children	16	21	37

Home and Hospital Teacher Service.

Mr. L. Bone, the Head of South Bristol Day Open Air School, reports :—

" The work of providing some amount of schooling for children of school age who are so severely handicapped physically that they are unable to attend an ordinary or special school has been carried on throughout the year 1950.

Two peripatetic teachers continue to be employed in this work which, in addition to visiting the home-bound children, entails weekly visits to the Children's, Southmead and Bristol General Hospitals and the Bristol Royal Infirmary as the need arises. The number of home-bound children catered for under the scheme has varied between 19 and

28, the average being 25, while the number of long-term patients of school age visited in the Hospitals has varied between nil and 10. At the 31st December, 1950, the actual numbers were:—Home-bound, 20; Hospital patients, 3.

During the year under review approximately 1,330 individual visits to the homes of children have been made by the teachers, while in most weeks throughout the year a half-day session has been devoted by one or both teachers to the hospital work. The number of individual lessons which can be given each week to the home-bound child depends upon the number of such children on the list. Usually it is now possible to visit almost every pupil three times each week.

In the twelve months, 27 were added to the list of home-bound children and 26 removed, the latter being accounted for as follows:—

Returned to school	...	...	...	19
Reached the age of 16	...	...	...	2
Other reasons (to Convalescent Homes, etc.)	...	...	...	5

The work calls for sustained enthusiasm on the part of the teachers engaged and this continues to be given without reserve. The parents of the home-bound children are very co-operative and look forward to the visits of the teachers, often as much as do the children."

Schools for Deaf and Partially-sighted Children.

The numbers of children on the registers at the end of the year at the day schools for Deaf and Partially-sighted Children are as follows:

	Boys	Girls	Total
Elmfield School for Deaf Children, Westbury-on-Trym			
Partially-deaf children	6	3	9
Deaf children (including 2 children from other authorities)	18	26	44
Classes for partially-sighted children, Shirehampton	15	10	25

In addition, the following handicapped children were being maintained in various special schools on 31st December, 1950.

Epileptic Children.

	Boys	Girls	Total
Lingfield Epileptic Colony, Surrey	2	—	2
St. Elizabeth's R.C. School, Herts.	1	—	1

E.S.N.

Allerton Priory R.C. Residential Special School, Liverpool	—	2	2
Besford Court R.C. Residential Special School, Worcestershire	10	—	10
Monyhull Residential Special School, Warwickshire	1	—	1
St. Christopher's School, Bristol. Day Pupils	4	2	6
" " " " " Resident Pupils	1	1	2
Sandhill Park, Bishop's Lydeard, Somerset	1	1	2

Blind.

Chorleywood College for the Blind, Herts.	—	1	1
Royal School for the Blind, Day Pupils	3	2	5
" " " " " Resident Pupils	9	1	10

Partially-sighted.

West of England School for Partially Sighted Children, Exeter	2	2	4
Chorleywood College, Herts.	—	1	1

Deaf.

Mill Hall (Independent) School, Cuckfield, Sussex	—	1	1
Rayners School for Deaf E.S.N. Children, Bucks.	1	—	1
Royal School for the Deaf, Birmingham ...	—	1	1
West of England School for Deaf Children, Exeter	—	1	1

Partially Deaf.

Ingleside (Independent) School, Reading, Berks.	—	1	1
---	---	---	---

Maladjusted.

Bourne House Hostel, Lincolnshire ...	...	—	1	1
Bylands, Stratfield Turgis, Hants ...	...	—	1	1
Halcon House Hostel, Taunton ...	...	—	1	1
Hill Orchard School, Warwickshire ...	...	1	—	1
Pittsburgh House, Stoke-on-Trent ...	...	—	1	1
The Sutcliffe School, Winsley, Bath ...	...	2	—	2
Wellesley Training Home, Windsor ...	...	—	1	1

Delicate.

St. Patrick's Open Air School, Hayling Island ...	—	1	1
---	---	---	---

Diabetic.

St. Monica's Hostel, Deal, Kent	—	1	1
-------------------------------------	-----	---	---	---

Physically Handicapped.

Burton Hill House, Malmesbury ...	...	—	2	2
Hattondale, Wellingborough ...	...	1	—	1
Heritage Craft School, Sussex ...	...	1	—	1
Hinwick Hall, Wellingborough ...	...	1	—	1
St. Rose's R.C. School, Stroud ...	...	—	1	1
Victoria Homes, Bournemouth ...	...	1	—	1

There were also the following children receiving education at various hospital schools at the end of the year.

Winford Hospital School, Somerset ...	...	18	20	38
Frenchay Hospital School, Bristol ...	...	33	18	51
Bath and Wessex Orthopaedic Hospital School, Bath ...	...	1	—	1

NURSERY SCHOOLS AND CLASSES

At the end of the year there were 11 nursery schools maintained by the Education Committee with accommodation for 772 children between the ages of 2 and 5 years. In addition, there were 20 infants' schools with nursery or baby classes accommodating in all 567 children between the ages of 3 and 5 years. All these nursery schools and classes remained full with long waiting lists.

Details of medical inspections in Nursery Schools and classes during the year are as follows:—

				Periodic Exams	Re-exams.
Nursery Schools ...	...	...	...	476	1,714
Nursery Classes ...	...	...	...	526	1,432
Number of Special Inspections and Re-Inspections				...	614

Classification of Nutrition.

	Number of children inspected.	"A" Good.		"B" Fair.		"C" Poor.	
		No.	%	No.	%	No.	%
Nursery Schools	476	169	35.50	245	51.47	62	13.03
Nursery Classes	526	302	57.41	203	38.59	21	4.0

Treatment of Minor Ailments.

No. of defects treated in clinics and at schools and classes	5,078
--	-----	-------

Treatment of Defective Vision and Squint.

Errors of Refraction (including squint) ...	...	34
No. of pupils for whom spectacles were prescribed ...	...	11

Dental Inspection and Treatment.

No. of pupils inspected by the Dentist—Periodic Inspections	...	999
Special Inspections	...	71
TOTAL ...	...	1,070

No. found to require treatment	...	498
No. actually treated ...	...	240
Attendances for treatment	...	298
Extractions of temporary teeth	...	225
Fillings of temporary teeth	...	15
Administrations of general anaesthetics for extractions	...	141
Other operations on temporary teeth	...	268

Medical Treatment of the Pre-school child.

The following cases of children under school age were treated at the various clinics during the year:—

Eye Diseases ...	...	107
Ear Diseases ...	...	128
Skin Diseases ...	...	330
Minor Ailments	...	121
Aural Surgeon's cases	...	84
Eye Specialist's cases	...	86
Heart Specialist's cases	...	7
Orthopaedic Specialist's cases	...	227
Chiropody Clinic cases	...	9
Skin Consultant's cases	...	55
Enuretic Clinic cases	...	6
Various ...	...	628
		1,788

INFECTIOUS DISEASES

Cases of measles among school children during the year numbered 1,264. School cases of scarlet fever totalled 516, whooping cough 982, and there were two cases of cerebro-spinal fever.

There were no cases of diphtheria in children of school age during the year. Ninety-three cases of poliomyelitis occurred amongst children of school age in 1950 with 13 deaths.

During the year 493 patients of school age were admitted to the Infectious Diseases Hospital at Ham Green, the average stay per patient being 25.3 days

Immunisation against Diphtheria.

The general arrangements for the immunisation of school children against diphtheria were continued during the year. It is estimated that approximately 72% of Bristol school children have now been immunised.

The complete figures for the year are as follows:—

Number given full course of immunising injections	...	...	282
Number given a "booster" injection	...	...	1,757
<i>Diphtheria cases amongst school children, in the last four years:</i>			
1947	...	...	22
1948	...	...	13
1949	...	...	3
1950	...	...	0

MEALS AND MILK SERVICE

At the end of the year 2,307 children were receiving free dinners and 17,750 on payment ; 57 kitchens were supplying meals at this time to 194 canteens in all types of schools.

Facilities for the distribution of dinners during the holidays were made available where necessary but the demand was small compared with term time ; 505,023 free dinners were supplied to " necessitous " children during the year as compared with 501,870 in 1949. The number of dinners supplied on payment, excluding those supplied to staff and certain other educational establishments was 3,314,201 as compared with 3,714,196 in 1949.

From a return taken in October, 1950, 44,020 children were supplied with milk daily.

SCHOOL MEALS SERVICE

In the fifty-five school meals kitchens 22,596 meals are produced each day. Of these, 20,057 are dinners provided for children and the remainder for teaching, kitchen and canteen staff.

It is the aim to produce a well balanced and attractive meal and, with this in view, the kitchen staffs are constantly advised by the Organisers responsible for the individual kitchens.

At present there are six members of staff taking cookery lessons one evening a week at the Women's Department, College of Technology, and as soon as possible a further twenty will commence training for a City and Guild Course.

Cook supervisors are expected to make full use of the allocation of rationed goods allowed by the Ministry of Food for school canteens. Every effort is made to provide fresh vegetables each day and fresh fruit as often as supplies and cost will allow. Salads are given twice a week during the spring, summer and early autumn, otherwise once a week except during the very cold months.

Canteen helpers have been provided with a white overall for use whilst serving the dinners and it is hoped to supply a second one next year to each helper. Kitchen staffs are supplied with two overalls and two caps or head covering.

The relations with the Health Department, as represented by the Sanitary Inspectors, are most happy and helpful. During the summer an experiment was carried out at Filton Avenue Kitchen under the supervision of the Deputy Sanitary Inspector on the comparative efficiency of two detergents. All concerned were very interested. During

the spring three talks on "Kitchen and Personal Hygiene" and "Causes of Food Poisoning," illustrated by film strips, were given by either Mr. Williams or Mr. Wintringham, of the Sanitary Inspector's Department, to all full-time members of the kitchen staffs.

At present the Sanitary Inspectors are giving talks and showing the film "Another Case of Food Poisoning" to canteen helpers and assistants. Approximately 300 have seen the film and there are three more talks to be given.

Very fortunately no cases of food poisoning have been reported this year.

School Milk.

Mr. F. H. Redstone, F.R.San.I., F.S.I.A., Chief Sanitary Inspector, reports :—

"Milk supplies to schools in the city are carefully supervised, and although the milk is all pasteurised, it is essential to ensure that this treatment has been carried out in accordance with the regulations. Last year 183 samples of milk were taken, 5 of which failed to pass the methylene blue test and one failed the phosphatase test. Investigations were made in respect of each sample which failed to reach the desired standard and in particular in respect of the sample which did not satisfy the phosphatase test, which is an indication of the efficiency of the pasteurisation process. The enquiries made failed to ascertain why this one sample should have failed, as the dairy records gave no indication of unsatisfactory processing and all other samples taken from this large high temperature short time plant were satisfactory. Nevertheless, although such occurrences are rare indeed, it emphasises the value of the supervision of milk supplies to schools.

School Kitchens.

The close co-operation that exists between the school meals service and the health department, in relation to kitchen hygiene, was maintained during 1950. Two special features were prominent during this year. First, the continued training of the kitchen and canteen staffs in food hygiene. This work entailed some fifteen special lectures by sanitary inspectors who used film strips to illustrate the points of their lectures. The kitchen staffs concerned have expressed their appreciation of the practical nature of the training given them and there is an undoubted improvement in their observation of the hygienic principles involved in food handling. Secondly, a special series of washing-up efficiency tests were carried out to ascertain what improvement, if any, would be secured by the use of an alternative detergent and sterilant of the hypochlorite class in place of the materials already in use. The series comprised eight carefully controlled tests at modern kitchens where sterilising equipment was available, and the results indicated that there was no significant improvement in the bacteriological assessment of the cleanliness of the articles and equipment washed with the alternative chemicals. This is not to say that the latter were ineffective, but that the existing methods were quite satisfactory.

Washing-up efficiency tests were started as an experiment in 1949 and the technique has now been accepted as a suitable basis of measurement of the standard of cleanliness of the washed articles. During 1950, 38 tests were carried out at school kitchen premises on four different phases of the washing-up process ; 31 proved satisfactory, 5 were unsatisfactory in two of the phases under test, while 2 proved to be unsatisfactory in all four phases. Advisory visits were made in connection with the unsatisfactory results before further tests were taken, and on the whole it is fair to say the results were quite gratifying. A further step towards ideal conditions in kitchens was achieved when twelve out of fourteen temporary kitchens in existence were closed during the year. In the remaining two kitchens solid fuel cookers were replaced by gas fired units, while another unsatisfactory kitchen was also closed. More suitable and improved equipment was provided in eleven other kitchens. During the year a programme of redecoration and structural improvements was carried through. Other schemes for still further betterment of the conditions existing in some of these kitchens are under consideration.

To provide clean food, continuous effort on the part of all concerned is a primary necessity. The health department's officers are grateful for the interest displayed in hygienic methods by the kitchen staffs, who receive advice and act upon it in a spirit of co-operation.

EMPLOYMENT OF CHILDREN

The Employment of Children Inspector reports :-

" During the year ended the 31st December, 1950, 9 children were medically examined and found fit to take part in theatre performances.

A further 690 children were examined and found fit for employment, but of these, 23 children did not enter employment for various reasons. The following table shows the employment into which these children entered.

<i>Trades</i>				<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Butcher	...	...	...	16	1	17
Dairy	...	...	...	2	2	4
Greengrocer	...	...	...	3	—	3
Grocer	...	...	...	25	—	25
Library	...	...	...	—	3	3
Newspapers	...	...	...	572	29	601
Others	...	...	...	10	4	14
Total	...	...	...	628	39	667

SCHOOL HEALTH SERVICE RECORDS

During the year an opportunity was taken to review the system of keeping the medical records of school children. The advice of Mr. R. G. Emblem, Records Officer to the Authority, was sought as to the most efficient method to adopt. In general there are two ways in which records of this type can be kept. One way is to keep the records relating to individual consultants in their several places. The main

drawback to this system is that whenever a complete case history is desired about one child a search has to be made in many places throughout the department. The other method, and the one which is widely adopted as the most efficient one, is to file together all the medical records relating to one child. With this system in operation whenever a child is examined by a consultant or a medical officer all the information as to the previous medical history is available. During the year the whole record keeping problem was considered in great detail and a plan devised based on this unit system. Previously the records had been kept at the various clinics and at some schools, and it was decided to centralise the whole of the records, including the main medical record cards Forms 10 M. at the administrative office at the Central Health Clinic. It was decided in order to simplify the filing arrangements as much as possible, to make out Forms 10 M. for all children in primary schools, retaining the old school medical records only for senior children. Some difficulty was experienced in obtaining filing equipment designed to take the main medical record cards, but sufficient equipment has now been obtained to commence the scheme and the necessary changes are now taking place on the following lines:—All the medical records, except the subsidiary record cards, i.e. Forms 11 M., and the minor ailment clinic record, have been transferred to the central office. Children in residential schools and certain other special schools are excepted from this scheme and the records relating to these children will continue to be kept at the schools, though it is hoped that a complete case history will be built up about each child. The details of the system which has been adopted on the advice of Mr. Emblem are as follows:—

Each child on first entry to school is allocated a seven digit reference number, the first three or four digits of which are the last two figures of the year and month of birth of the child; index cards and cards for the periodic medical inspections are completed, and all the records relating to a child are placed in an envelope which is filed in numerical order. As this number is also the date of birth the records relating to children of school leaving age will be together, thus making their transference to the "left school" file a simple matter. This file of children who have left school will also be in numerical order, thus making it easier to find an old record as the reference number should be easily found from the alphabetically filed index cards. A tracer card will be used to indicate which records have been extracted, thus periodic checks can be made for misfiled envelopes with a view to minimising one of the most fruitful sources of lost records.

The medical inspection index cards are filed in numerical order (that is, in date of birth order) but under each school name. A notch is clipped out of each card in a pre-arranged position after each of the three periodic inspections have been made. It is thus possible to look at a block of cards for, say, the fourteen year olds, at a given school, and tell at a glance which children have not had the "leaver" examination. Should a medical officer require to see a child at a medical inspection when that child is not due for a periodic inspection the clerk

can either turn the child's card upside down so that the visible edge shows no notches, or the clerk can extract the card and re-file behind a suitably headed guide card. It is hoped in this way to minimise the risk of a child missing either a periodic inspection or a follow-up examination.

It is expected that the change-over will be completed by the summer of 1951. In the meanwhile plans are being considered for mechanising the production of the statistics, which the centralisation of the medical records will make simpler.

TRANSMISSION OF MEDICAL INFORMATION BETWEEN HOSPITALS AND THE AUTHORITY.

During the year conferences have been held from time to time with representatives of the teaching hospital, the Regional Hospital Board, the adjacent Local Authorities and members of the Local Executive Councils to consider the details of the arrangements for the transmission of information about children requiring consultant or hospital advice, on the lines of the agreement arrived at between the British Medical Association and the Society of Medical Officers of Health at a meeting on 20th January, 1950. It was agreed at that meeting, that general practitioners should be given an opportunity of making arrangements for consultant's opinion on child patients and that a copy of the specialist's report should be sent to the child's own doctor, where the reference was from the Authority's Medical Officers.

As a result of the discussions held in Bristol a working party was set up to consider details, and agreement was finally reached in conformity with the resolution. A form of letter was drawn up to be forwarded to the general practitioner in cases where the school medical officer wished to refer a child for consultant advice, giving the general practitioner an opportunity, should he so desire, of himself making the arrangements. A period of fourteen days is allowed for the general practitioner to reply. In this suggested letter a space is incorporated for a reply from the general practitioner to the Local Authority and a business reply envelope is to be enclosed in which the reply could be sent. It was found upon investigation that about 3,500 cases of children of school age per year were being referred to consultants by medical officers of the Local Authority. Most of these cases were for consultation with the ear, nose and throat surgeon in the Authority's clinics. The hospitals agreed to supply a copy of the consultant's report to the school medical officer, where a child is referred by the general practitioner, and vice versa. Forms have been devised and agreed upon for referring the cases and it was felt that these would effect a great economy in time and labour, both to the referring doctor and the hospital. In regard to school children referred by medical officers of the Authority the work would be done through the central office of the Local Authority, which would act as a clearing house for this information. The substance of the letter which the referring doctor wished to be sent would be indicated on the records on which the recommendation is made though the actual letter itself would be typed in the office by the records clerk. It is thought important that the letter

should give the name of the referring doctor and the consultant to whom reference should be made. After the consultant's report is received the arrangements are that the child would either be brought up to the clinic for special examination at a convenient time or would be seen as soon as possible by the medical officer when visiting the school.

SPRAYING IN SCHOOLS

Dr. A. L. Smallwood reports :—

" During the course of the year an experiment was made with the idea of determining whether it was possible to influence the incidence of infection in schools by regular atmospheric spraying with a commercial preparation of ethylene glycol. It has always been agreed that the school is a meeting ground of children with various bacteriological flora and that a useful point of attack on the incidence of cross infection at schools would be to diminish the numbers of organisms in the classrooms. The ordinary process of cleansing as done by the caretaker and the cleaners is more concerned with the physical removal of dirt and it is at least likely that the constant traffic and the confinement of children in a fairly limited space may give rise to a concentration of organisms deposited in that space and offer a field which is susceptible to attack. The idea of spraying such as this is not new, but hitherto the preceding views, though theoretically highly likely, have not been confirmed. However, so far as we know, controlled experiments have not been done in the schools and as a pilot investigation it was decided to make an experiment in three schools, with three other schools acting as "controls". The schools selected were two junior mixed and four infants' schools, and in pairs these were as near as could be found of identical character, i.e. in the numbers of children on the registers, the social character of the area, and the geographical situation and the type and age of school. The time during which the experiment was done was in the Autumn term of 1950. In this term more infections of a non-specific character are likely to arise. In the Spring term the specific infections complicate the picture and in the Summer term infection is, of course, at the minimum. There was difficulty in assessing the possible causes of absence, i.e. in counting the number of infections that occurred in any one school, and it was finally arranged to take as a criterion of infection the mere presence or absence of a child at school. Since the schools and their "controls" in pairs were of entirely similar character and population the only possible variable to account for any difference in attendance rate was that due to the presence of infection. The teachers were asked to note the absence of children due to any extraordinary causes and in the case of one pair of schools this in fact negated the results from those two schools.

The actual spraying was done in the morning and again at lunch time by the caretaker who carried a reservoir pressure type of spray. A representative of the firm manufacturing the agent attended each of the schools which were sprayed to demonstrate the use of the material, and by the kind co-operation of the Chief Sanitary Inspector, the Sanitary Inspector for the district exercised general supervision over the spraying

process. Generally speaking this work was done quite satisfactorily by the caretakers who showed considerable interest in this work, although of course it involved extra duties, and they were helped undoubtedly by the interest shown by the Heads of the school in the experiment. At the end of the term the total attendance figures were taken and compared with a similar period in 1949, and also with the Summer term of 1950, when no spraying was done, so that possible variations due to normal occurrences could be discounted. The table which follows shows the results obtained. The figures given show that in each case the "sprayed" school shows a higher attendance rate than the "control" school, with the exception of the Summer term of 1950 where the figures are so close that the difference might have arisen by chance. In the case of schools C and D there was much chicken pox and mumps in the "control" school during the Autumn term of 1950, which gave an abnormal picture. In the schools A, B, E and F it appears from the available evidence that the spraying had had no appreciable effect on the attendance rates. What was interesting, however, was that there was a difference between the "sprayed" school and the "control" school in the attendance rates in favour of the former in the Autumn term of 1949 and 1950, i.e. whether the school was sprayed or not. The figures are given with the standard error of difference in brackets immediately below the average percentage of attendances of the "sprayed" school. There must have been a selective element which caused these differences, and eventually it was realised that the reason why the school was selected for spraying was because, when the schools were being considered in pairs, though being identical in every way, the school selected for the actual spraying, was the one which had the better caretaker who was more likely to do the work thoroughly and take an interest in it. To a less extent the interest of the Head of the school was a potent factor in an indirect way because obviously he did not do the actual process of cleansing, i.e. if the caretaker was fundamentally less efficient no amount of enthusiasm on the part of the Head would get the school efficiently cleansed, whereas where a caretaker was highly efficient even if the Head had no interest in the process it would not diminish the efficiency of the caretaker. In each case of the paired schools the sprayed school seems always to show a high attendance rate more than twice the standard error of difference compared with the control school. This seems to indicate that the efficiency of caretaking has a much higher effect on the incidence of infection, i.e. on the health of the children than has hitherto been recognised. It must be emphasised that this was a pilot survey involving six schools only and that before any general conclusion can be reached a much wider application of these methods would be highly desirable. However, it is suggested that much sickness can be avoided by increased attention to the physical cleanliness in schools and the adoption of a higher standard of hygiene by the caretakers.

In the preparation of these statistics I should like to acknowledge the valuable advice and assistance which has been given by Dr. G. Herdan, Statistician to the Preventive Medicine Department of the University of Bristol.

Record of Attendances in "Sprayed" and "Control" Schools.

	Sept.—Dec. Term, 1949			June—Sept. Term, 1950			Sept.—Dec. Term 1950			Remarks
	Possible Attend'ces	Attend'ces made	Average % of Attend'ces	Possible Attend'ces	Attend'ces made	Average % of Attend'ces	Possible Attend'ces	Attend'ces made	Average % of Attend'ces	
<i>Sprayed School</i>										
A Junior Mixed ...	76,220	69,655	91.3% (.151)	62,164	55,923	89.9% (.17)	79,873	72,832	91.1% (.151)	No epidemics in Dec. Term 1950.
<i>Control School</i>										
B Junior Mixed ...	70,972	64,064	90.2%	60,398	54,518	90.2%	74,351	67,198	90.3%	No epidemics in Dec. Term 1950. 3 long absence cases
<i>Sprayed School</i>										
C Infants ...	35,440	31,610	89.1% (.22)	40,550	35,279	87.0% (.218)	41,524	36,615	88.1% (.235)	No epidemics in Dec. Term 1950. 5 long absence cases
<i>Control School</i>										
D Infants ...	54,322	47,337	87.1%	58,730	51,038	86.8%	53,124	42,461	79.9%	In Dec. Term 1950. 36 cases Ch. Pox., 64 Mumps 34 long absence cases
<i>Sprayed School</i>										
E Infants ...	27,692	24,430	88.2% (.276)	29,324	25,208	85.9% (.289)	27,344	24,490	89.6% (.268)	No epidemics in Dec. Term 1950. 3 long absence cases
<i>Control School</i>										
F Infants ...	31,474	23,054	85.8%	29,794	25,568	85.8%	31,182	26,937	86.3%	No epidemics in Dec. Term 1950. 8 long absence cases

PARTIALLY SIGHTED CHILDREN

Towards the end of the year, a special investigation was made into the numbers and method of ascertainment of the partially-sighted children in Bristol. This was, in the first place, occasioned by the need to provide alternative accommodation for two existing classes which are at present housed in classrooms in an ordinary school, classrooms which it is desired to use for other purposes because of pressure of numbers there.

The history of provision for these children in Bristol is that a start was made in this city by setting up a class in March, 1913, at the Pupil Teachers' Centre, Broad Weir. Previously, as happened all over the country, the more severely handicapped children were admitted to schools for the blind and the less seriously affected to ordinary schools, where a front seat in the class and a good light were considered adequate provision. This special class had accommodation for forty children and to begin with seventeen children were in attendance. In July, 1914, the class moved to premises at New Street, St. Jude's, where there was also a class for deaf and partially-deaf children. The children were mostly those suffering from myopia of more than an arbitrary limit of five dioptries. There was also a small number of cases of eye disease which had resulted in corneal opacities. The school nurse attended daily for treatment purposes and the children were examined at regular intervals by ophthalmic surgeons of the Eye Hospital and the Eye Dispensary.

The teaching was largely oral, with reading and writing restricted as far as possible and confined to large types and large black-board letters. A mid-day meal was provided because of the long distance many of the children travelled. At the end of 1914 there were 33 children on the roll, and in 1924 there were three classes with a total of 70 children. In June, 1927, all the children, both deaf and partially-sighted, were transferred to Moorfields School, Russell Town Avenue, where they occupied the department previously used as an Infants' School. Here there was special accommodation, hall, cloakroom and kitchen facilities, since the school was fairly modern, and of the six classrooms three were used by the partially-sighted children. The number fell from a maximum of 76 children in 1929 until in 1939 there were 52 children on the registers. It must be remembered that until the 1944 Education Act, it was not possible to enforce the attendance of the partially-sighted child at the special school until he was 16, unless he was "certified" as "blind."

On the appointment of Mr. R. Ramsay Garden as Ophthalmic Consultant to the L.E.A. in 1930, the care of the children was taken over from the Eye Hospital and the Eye Dispensary and the examinations were carried out in the Committee's clinics.

During the war, the school for partially-sighted children was evacuated in 1942 to a house at Farleigh Coombe, Somerset, and became residential in character. It returned to Bristol in the summer of 1944 and re-opened in January, 1945, in classrooms at Shirehampton School,

Bristol, with 28 children on the register. This number remained fairly steady, there being 27 children on the register at the end of 1950, with 14 on the waiting list for admission. During this year the increasing needs of the school where the two classes were situated brought strong pressure for the desire for alternative premises. In the course of deciding what sort of premises should be used, some doubt was caused as to the need of certain of the children for special educational treatment. It was therefore decided to institute a detailed enquiry into the numbers and types of children with severe eye defects which might fall in the category of handicapped children.

CHILDREN AT PRESENT IN ATTENDANCE AT THE SCHOOL FOR PARTIALLY-SIGHTED

	<i>Age</i>	<i>I.Q.</i>	<i>Defect</i>	<i>Vision, far & near</i>	<i>Recommendation</i>
1. M.B.	11	109	Albinism	V.6/36 both J6 slowly J8.	Remain at P.S. school
2. T.C.	14	86	Hypermetrope	6/9 6/12 c gl. J1 J1 slowly.	Return to O.S.
3. C.C.	12	67	High myope	6/36 6/18 c gl.	Remain at P.S. school
4. T.D.	10	86	Cataracts	2/60 6/18 J6 slowly.	Remain at P.S. school until operation
5. R.E.	14	97	Nystagmus astigmatism	6/12 6/18 c gl.	Return to O.S.
6 B.E.	14	104	Myope	6/12 6/9 c gl.	Return to O.S.
7. J.F.	13	95	Myope	6/9 6/12 c gl. J1	Return to O.S.
8. B.F.	12	103	Myope	6/24 6/18 c gl. J1	Remain at P.S. school
9. M.F.	12	104	Myope	6/9 6/12 c gl.	Return to O.S.
10. A.H.	13	83	Albinism nystagmus	6/24 both c gl.	Remain at P.S. school
11. P.H.	11	85	Myope	6/9 6/9 pt. c gl.	Return to O.S.
12. D.H.	14	66	Nystagmus	6/12 pt 6/12 pt with gl. J1.	Remain at P.S. school
13. R.H.	11	109	Myope	6/9 6/60 c gl.	Return to O.S.
14. K.H.	13	125	Myope	6/12 both c gl.	Trial at Grammar Sch.
15. J.I.	15	136	Nystagmus	6/12 0/0 c gl. J1.	Trial at Grammar Sch.
16. E.P.	15	103	Myope	6/18 6/9 pt. c gl. J1.	Return to O.S.
17. D.P.	11	80	Hypermetrope	0/0 6/18 c gl. J0 J1.	Return to O.S.
18. P.R.	15	88	? Buphthalmos megalocornea	6/18 both J8 J12.	Remain at P.S. school
19. A.S.	7	87	Myope & corneal scarring	Vision ? immature	Remain at P.S. school
20. J.S.	12	103	Hypermetrope nystagmus	6/36 both c gl. J.2 J.4	Remain at P.S. school
21. J.S. Boy	11	123	Albinism, myope nystagmus	6/24 6/36 c gl. J1 slowly	Grammar School
22. R.S.	14	112	Myope	6/6 6/6 pt. J1.	Return to O.S.
23. R.T.	9	97	Myope	6/12 both c gl. J1.	Return to O.S.
24. A.W	6	94	Myope	6/12 6/12 at least	Return to O.S.
25. P.W.	12	93	Myope	6/18 6/9 pt. c gl. J1.	Return to O.S.

O.S. = Ordinary school

P.S. = school for partially-sighted children

In addition to the 25 children on the registers of the special school, a further 38 children, at present in ordinary schools, were examined. These were children who were either on the waiting list for the special school or thought to need special educational treatment in the ordinary school.

The team involved were the consultant ophthalmic surgeon, the educational psychologist and the school medical officer, with complete reports from the teacher and with the advice of the chief inspector of schools.

The Ministry of Education took the opportunity to participate in these investigations in the hope that the conclusions would prove of value in throwing light on the problem of providing for partially-sighted children generally in the country and representatives of the Ministry attended the enquiry.

On page 38 is a list of the 25 children at the Special School and the results of the investigation. In every case, the intelligence was assessed on the Revised Stanford-Binet Intelligence Scale, 1937, together with other tests when there was discordance with the teachers opinion.

CHILDREN AT PRESENT AT ORDINARY SCHOOLS AND WHO ARE RECOMMENDED FOR
TRANSFER TO THE SCHOOL FOR PARTIALLY-SIGHTED

	<i>Age</i>	<i>I.Q.</i>	<i>Defect</i>	<i>Vision, far & near</i>
D.B.	7	85	Post-polar cataracts, nystagmus	3/60, 6/60 c gl. J.10 (?)
A.McG.	9	94	Nystagmus Hypermetrope C.S.L.E.	6/36 both c gl. J.6.
A.W.	10	69	Myope	6/12 both c gl. J.1.
P.C.	5	un-testable	Congenital cataracts	
M.T.	8	108	? Lebers optic atrophy	6/18 6/12 pt. c & c-out gl. J.1.

SPECIAL CASES—AT PRESENT IN ORDINARY OR SPECIAL SCHOOLS

	<i>Age</i>	<i>I.Q.</i>	<i>Defect</i>	<i>Vision, far & near</i>	<i>Recommendation</i>
P.C.	9	83	Corneal scarring; recurring phlyctenular keratitis	3/60 4/60 both c gl. J.10.	To remain in E.S.N. class in ordinary school. May need transfer to school for blind later.
G.L.	9	86	Congenital nystagmus; hypermetrope	2/60+ both.	For admission to School for Blind.
V.R.	13	69	Myope corneal scarring.	6/24 both c gl. J.1. slowly.	To remain at E.S.N. School.

AT ROYAL WEST OF ENGLAND SCHOOL FOR PARTIALLY-SIGHTED CHILDREN, EXETER

	<i>Age</i>	<i>Defect</i>	<i>Vision, far & near</i>
R.S.	14	Macular degeneration	6/60 6/60 with glasses.
R.F.	9	Myopia	6/9 pt. 6/9 pt.
I.N.	15	Myopia	6/36 6/36
R.R.	10	defective pigmentation, nystagmus	6/24 6/24 J.2. with glasses

AGE SCATTER OF THE 63 CHILDREN INVESTIGATED

Age	5	6	7	8	9	10	11	12	13	14	15	Total
In P.S. Sch —		11	11	—	1	1	5	5	3	5	3	25
In O.S.	1	3	5	4	6	5	4	3	4	3	—	38
Together	1	4	6	4	7	6	9	8	7	8	3	63
At Exeter					1	1				1	1	4
Total	1	4	6	4	8	7	9	8	7	9	4	67

Omitting two extreme ages of 5 and 15 years, average incidence of severe eye defects = 6.9 children per year.

Intelligence Levels: Mean I.Q. at P.S. School 97.4

" " at O.S. School 99.2

Together 98.5

Ascertainment.

It will be seen that there is in Bristol a total of 14 children who are judged to be in need of special educational treatment. These have an age scatter as follows:—

1 at 5 years	1 at 11 years
2 at 7 years	3 at 12 years
1 at 8 years	1 at 13 years
1 at 9 years	1 at 14 years
2 at 10 years	1 at 15 years

The mean I.Q. of 13 of 14 of these children, omitting one who was untestable, was 89.1. Of the 14, ten are 10 years and upwards and the number of infants in need of special educational treatment is remarkably small. Four children from Bristol are at the Royal West of England School for Partially-Sighted Children, Exeter.

The total of 18 children represents a rate per thousand of 0.33. This contrasts with the figure of the 1934 report (1) of 1.0 per 1,000: it agrees more closely with the 1947 figure in Scotland (2) of 0.24 per 1,000. As has been said (3), a day special school to provide for numbers such as occur in Bristol will be very small indeed, and if this rate is true for the rest of the country, outside London no Authority may have sufficient children for a decent-sized school and provision may have to be for part day and part residential pupils or all residential pupils. It is possible, of course, that for many reasons Bristol may have an unduly low incidence of partially-sighted children in comparison with the rest of the country. More surveys of a similar kind are urgently needed.

What was brought out clearly by the survey was the need for team ascertainment. While it was felt that the ophthalmic consultant, the educational psychologist and the school medical officer should confer about a child, the presence of the teacher was not essential so long as the report of the child's ability in school was available. In some cases a special visit to the school for consultation with the teacher and to see the pupil's work was needed, and here and also with the assessment of borderline cases, the assistance of the Chief Inspector of Schools was very valuable.

It should be noted how fortunate this Authority is in having the continuous service, as consultant, of Mr. Ramsay Garden since 1930. As a result of the National Health Service Act, 1946, there was some danger of the loss of this continuity; it is fortunate that the Authority has been able to secure his services in a consultant capacity for one session per week for children with markedly defective vision.

On examination of the performances of the children selected for special educational treatment in a special school, it will be seen that no rigid adherence has been made to an arbitrary figure of 6/24 in the better eye. Case No. 12, for example, sees 6/12 part with both eyes, and Case No. 14, 6/12 both eyes with corrected vision, whereas in a boy recommended to stay at ordinary school, the vision is 6/60 in both eyes. Myopia as a cause of severely defective sight occurs in 40 out of the 67 children surveyed (59%) but only in seven out of the 18 (39%) recommended to stay at the special school. In London in 1938 (6) "about two-thirds" of the partially-sighted children were myopes. The changed medical policy of the need of children with myopia for special educational treatment, which has been well summarized in *The Health of the School Child* (3), has, in this Authority, apparently been carried to its logical conclusion. In general, it is not believed that the use of the eyes under controlled conditions in ordinary schools is likely to lead to deterioration in the ability to use them (4) (5). As has been said in the Scottish report (2), "the saving of a few dioptries may be bought at too high a price." For some years, there was kept in this Authority a register of children with a defect of five dioptries or over but gradually the mechanical appraisal that such a register implies was dropped, though it must be admitted that most of them must have been admitted to the School for Partially-Sighted when 76 were in attendance. According to the 1934 report, "The Committee consider that if a child has gained a scholarship to a Secondary School, the question whether he should be debarred for ophthalmic reasons from benefiting by it is one which requires very careful consideration and should not be decided by any arbitrary rule. The responsibility of refusing secondary education to a child capable of profiting by it is a heavy one. In the Committee's view there cannot be many cases where the ophthalmic surgeon would be justified in incurring that responsibility for ophthalmic reasons alone." Myopia by itself seems to have been recognised at least since 1934 (1) as "causing little inconvenience apart from the necessity for wearing glasses" in 90% of cases, and it is surprising that so much emphasis has remained on it as a limiting factor in education.

It happens that there is a school for the blind in Bristol which at present is receiving 18 children who are the responsibility of this Authority and the same ophthalmic surgeon has acted until recently as Consulting Adviser to this school. Thus it is possible to be aware of any missed cases where the eye-sight has deteriorated to such an extent that they have eventually needed education in the School of Industry for the Blind and the workshops attached.

It will be noted that the scatter over the age groups of children with severe defects of vision is fairly even and, omitting the two extreme ages, averages 6.5 children per year ; or including the three Exeter children between 5 and 14, 6.9 children per year. The maximum numbers of children with severe eye defects are found at 10 years of age and onwards, but over 10 a higher proportion are in attendance at the special school than otherwise. One child aged nine years, with an I.Q. of 86, in the care of the Authority and in attendance at a school not maintained by this L.E.A., has been recommended for the School for the Blind. Three of the children have been recommended for transfer to the special school and two others are to be reviewed in six months' time before a decision is made, but they will probably be transferred. Two other children are considered to be properly placed in the school or class for educationally sub-normal children.

One boy is worthy of special mention ; now aged 12 years and attending the secondary modern school, he was found to have poor vision from poor macular development and nystagmus in 1939 at the age of a few months. His parents have always refused to allow him to attend a special school and, because of his good progress at the ordinary school, the ophthalmic surgeon has never been able to say that the boy " could not follow the ordinary curriculum, etc." He now sees R.6/60, L.6/60, binocularly 6/36 and near vision J.2 slowly. It is quite obvious to a visitor at the school, that the visual defect is handicapping the boy very little indeed ; his I.Q. was found to be 109 and he is in a " B " class. He sits on the front row of his class in a building that is by no means modern ; if he cannot see the blackboard he is allowed to leave his seat and inspect the board at closer range. This privilege is never abused, and the other children in the class never comment. He is well-adjusted to his disability and freely accepted by the other children. He plays all games ; at Rugby he has acquired a reputation as a " hooker " and says he can see the ball anywhere on the field. At cricket he is a little less confident, and in physical education cannot see small objects such as tennis balls. His disability, however, does not stop him attempting any physical feat.

On examination of the children in attendance at the special school it is at once apparent that only the rare child under the age of 10 years is admitted. The mean I.Q. of this group is 97.4, which is a surprisingly close approximation to the normal mean. Three of these children were outstanding, K.H., J.I. and J.S., with I.Q's. of 125, 136 and 123 respectively. In the case of K.H. the father works at the Blind Workshops and the parents refused to allow an application to be made on the girl's behalf to Chorleywood College. A place will be found for

her at an ordinary Grammar School. J.I. was due to leave in three months' time and the parents have agreed to allow him to attend a Grammar School for a trial period. For J.S. also, a trial period at a Grammar School has been arranged.

Educational Provision.

Educational provision must of necessity depend on the numbers of children involved. With only 14 who need special educational treatment in a day special school, and only four of those under the age of 10 years, the difficulties are going to be considerable. At present, four children are in attendance at the Exeter School for Partially-Sighted, which is a residential school, but it is extremely unlikely that all 14 could be got there even if the parents were to agree. There remains the problem of whether a special school or classes should be continued and, if so, where. With the demand on accommodation as high as it is to-day, most of the properties which have become available have been disused small schools, in undesirable surroundings, because of falling population. The amenities of such schools are at a minimum, and usually the lighting, which is so important a feature, is also at a minimum because of poor window space. A modern type of classroom with good window space and adequate room for the children to move about would, therefore, seem essential. During the survey, it was noted that the children find their educational needs filled more by the practical method of the modern school when they would perhaps not do so in the more formal practice found in previous schools.

"Co-operation" or "association" with other children (2) such as the physically handicapped would seem to be an obvious solution, and a scheme is at present being examined for providing classroom accommodation at the Open-Air School. Most of the work of the 14 children would be individual in character; some of the time, however, the children could associate with the children with normal eye-sight, for example, for music, physical activity, some hand-work and for art. The feeling of segregation would not be so strong in a school which caters for three types of handicaps, and in the survey it was felt that segregation was having harmful effect in some cases.

The use of visual aids of the Leeds and London types has only just commenced; both types have good and bad features which have been fully set out (3) but, undoubtedly, if a suitable model could be devised this would be of very great assistance, not only to the children in the special school, but to certain children of poor vision in the ordinary schools. For children who have been sent from the special school to the ordinary school and for many of the subjects of the survey who are remaining in ordinary schools, teachers have been given special instructions about their needs. In only one case was it necessary to recommend that the child be sent to a school other than the one he would go to according to geographical location, because of the poor lighting there. While the use of lenses is expected to increase for these children, it must be remembered that they would not necessarily be used for writing, since children write much smaller than they would easily read. A recommendation (2) too, that has not been carried out

up to now, is that two pairs of glasses should be provided for each child, one of which should be kept in reserve at the school in case of breakages.

During the course of the survey it was notable that the parents showed, on the whole, very good co-operation and were very keen that their children should have every opportunity for educational advancement. It may be, as with the blind, that the partially-sighted child will need residential school placement eventually, as was suggested in "The Health of the School Child" (3) but, good though the parent co-operation is, it does not seem at present that public opinion would be ready for such a move, nor, of course, are there sufficient residential special schools.

References.

1. Report of the Committee of Enquiry into problems relating to Partially-Sighted Children, H.M.S.O., 1934.
2. Pupils who are defective in vision, Report of the Advisory Council on Education in Scotland. H.M.S.O., 1950.
3. The Health of the School Child, 1946-1947, H.M.S.O. p. 108 et seq.
4. The Partially-Sighted Child, P. McGregor Moffatt, M.D., F.R.C.S., D.O.M.S., D.P.H., Public Health, vol LXI. Sept., 1948, 245.
5. Ascertainment of Visual Defect in Children, D. D. Stenhouse Stewart, M.R.C.S., L.R.C.P., D.O.M.S., Public Health, vol. LX, Aug., 1947, 215.
6. School life and after for the handicapped Child, W. Allen Daley, M.D., M.R.C.P., D.P.H., Proc. Roy. Soc. Med., vol. XXXI p. 77, April, 1938.

GRAPHICAL REPRESENTATION OF PHYSICAL DEVELOPMENT IN CHILDREN

By G. Herdan, M.Sc., Ph. D.

1. The value of recording height and weight of school children as indices to their physical development has long been recognised. The use, however, of both of these characteristics in conjunction is a more recent development. Of the literature on the subject, we quote papers by Dr. E. R. Bransby, of the Ministry of Health, in "The Medical Officer," 12th, 15th and 26th May, 28th July, 4th August, and of the 22nd September, 1945, the investigation by Dr. E. Lewis Fanning and E. H. Mulligan in "The Medical Officer," 8th January, and 15th January, 1944, and also a publication by A. Sutcliffe and J. W. Canham, "The height and weight of boys and girls," London, 1950, apart from more specialised investigations relating to specified age groups.

The purpose of using height and weight in conjunction is to find out whether the deviation of the normal child with regard to height and weight is such as to provide a standard against which to judge the development of the abnormal child, whether the abnormality is permanent, or temporary due to disease.

It has been found that heights and weights in a sufficiently large group of normal school children are linearly related with one another and that the straight line connecting the changes in both these character-

istics can be used as such a standard. Any deviation in the development of a child from the line can be interpreted as a deviation from normality in the development.

II. Representation of this kind, however, does not fully take into account the different types of children according to "stockiness" and "lankiness." It is evident that the development in any child should be judged against the standard obtained from normal children of its own kind. As a convenient background against which to judge the normality or otherwise in the development of the child, the "Grids for Evaluating Physical Fitness" designed by Dr. N. C. Wetzel, U.S.A., were used with success.

The idea of the chart is as follows. The curves on the chart represent the more or less linear portion of the function which Dr. Wetzel has found to connect height and weight in normal children. The approximate straight line relationship is given for children of different types of body build, each allowing for a certain scatter. The chart has been tested in a great number of American schools and the method is described in correct detail in the papers published by Dr. Wetzel, for instance, in *Health and Physical Education*, Dec., 1942, p.310, in the *Journal-Lancet*, Minneapolis, May, 1948, and in an instruction manual for the use of the grid published by Nea Service Inc., New York, Main Office, 1200 West Third Street, Cleveland, Ohio. The charts can be used in a two-fold way; (a) for showing the physical progress for individual children with changes in height and weight, and (b) for showing the differences between groups of children of one and the same age in different regions. The chart includes also a section on metabolism, giving the standard curve for metabolism obtained of school children against which to judge whether the progress of any specified child is normal.

The plotting of points on the chart is quite straightforward. It consists simply in putting a dot at the crossing point of the horizontal and vertical ordinate corresponding to the height and weight of the child. For obtaining the corresponding point for metabolism at that stage of development of the child, a point is plotted on the metabolism chart, where the ordinate for the age of the child cuts the prolongation of the numbered slanting lines (termed level lines) on the height and weight portion of the chart.

The justification for this procedure lies in the fact that metabolism is a function of the body surface and the body surface again a function of height and weight. Provided that Dr. Wetzel's computation of the curve for metabolism is correct, it is thus easy to understand why a combination for height and weight should lead in this way to an evaluation of metabolism.

III. This brings us to the question whether these charts obtained for American school children could be used in this country at the present time. In order to answer this question, data of heights and weights for boys and girls from two to eighteen years were taken from a "Study of Individual Children's Diets" by E. M. Widowson, Medical

Research Council Report No. 257, H.M. Stationery Office, 1947. These data were plotted in the usual way on the Wetzel grid, and the conclusion is that on the basis of children's development in the years 1936 to 1939, these charts could be used with confidence in this country.

It is, of course, realised that before advocating the use of these charts to a wider public, one would have to obtain data equally reliable, as in Dr. Widowson's report, for present-day school children.

In order to give this method of recording a trial with data which are of possible interest to the medical authorities in Bristol, children of one age group, viz., those born in 1943 and frequenting different types of schools in Bristol, were measured for height and weight and the data was recorded. Since the investigation was done in 1948, the group comprises a cross-section of the five-year-olds in that year.

The results fully justified the use of the chart for the purpose of recording group properties in the school children of the population (Point b of the possible uses).

Of the schools included in the investigation, one School is in a district in which social classes 1 to 3—in the Registrar General's use of the term—predominate, whereas the other school is in a district where social classes 4 to 5 predominate.

Of the following diagrams, 1 and 2 refer to the better class school and show that the children are mostly of the heavy type; the points representing the heights and weights lie above the medium line for the average child. Diagrams 3 and 4, on the other hand, showing the development of children in the poorer class school, indicate that the children are mostly deficient in development, or at least in weight compared with the children in the upper class schools, though the sample from this school (Boys) contains many well-developed children.

As regards use (a) of the chart, that is, the use for following the individual development of a child, using a combination of height and weight as an index of its physical health, graphs 5 and 6 are added, of which the first shows the characteristic deviation from normal development due to growth failure caused by B12 deficiency in the child, and the recovery after the deficiency had been made good, and Diagram 6 shows characteristic curves for malnutrition generally, and the effect of treatment upon the progress of a child.

GRID FOR EVALUATING PHYSICAL FITNESS (N. C. Wetzel, M.D.)

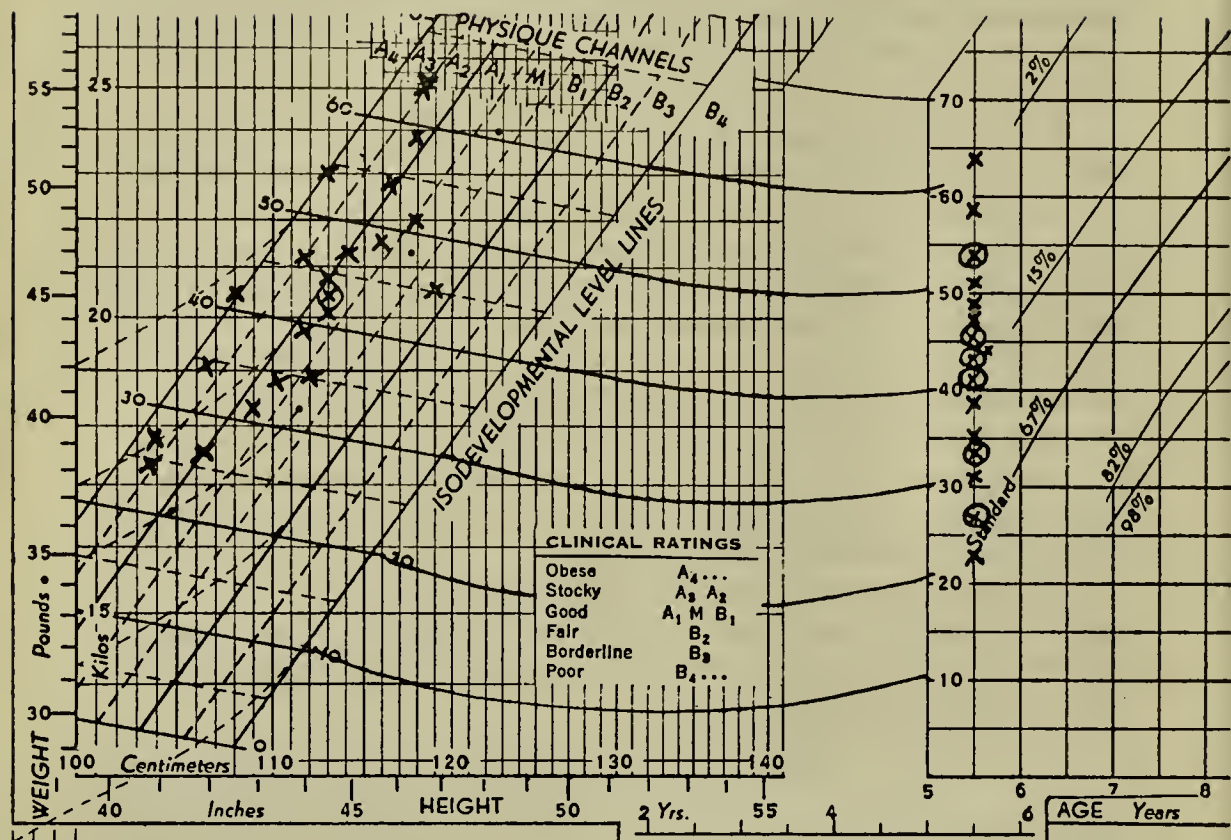


Diagram No. 1 (Boys)

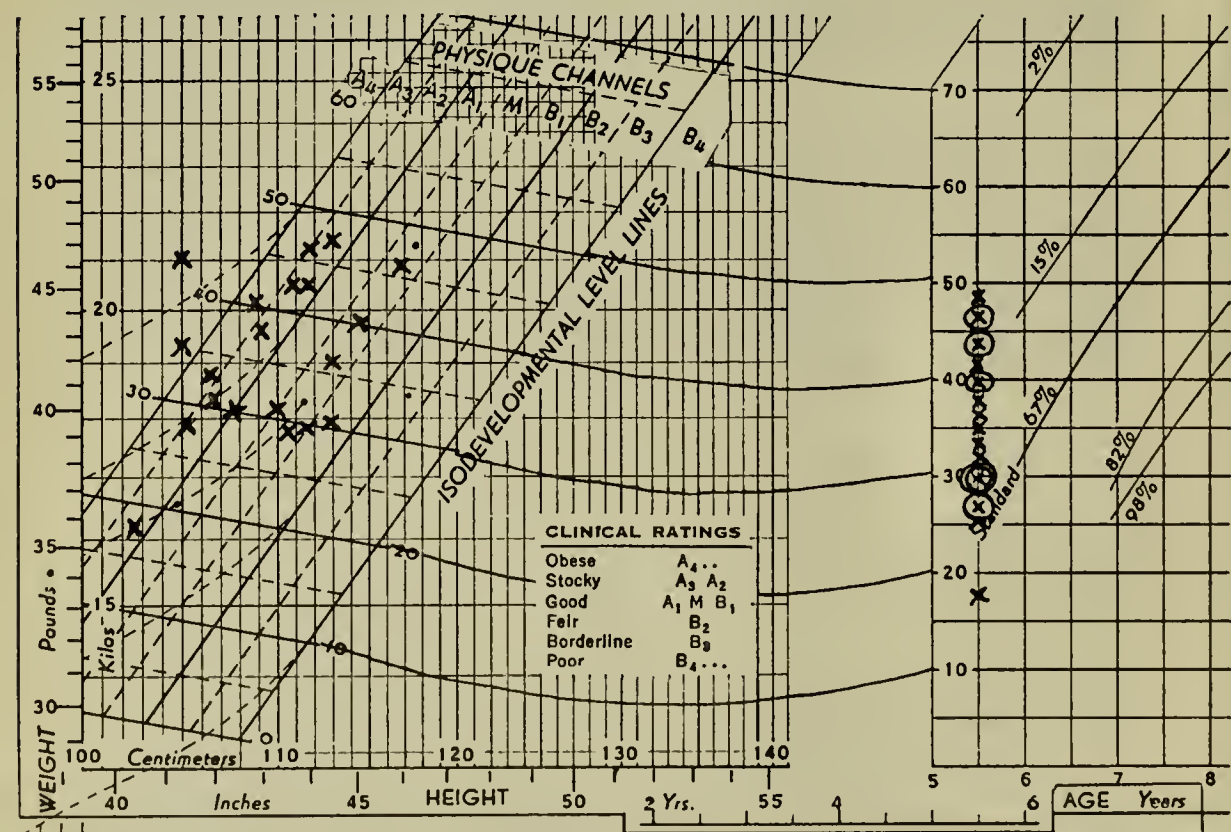


Diagram No. 2 (Girls)

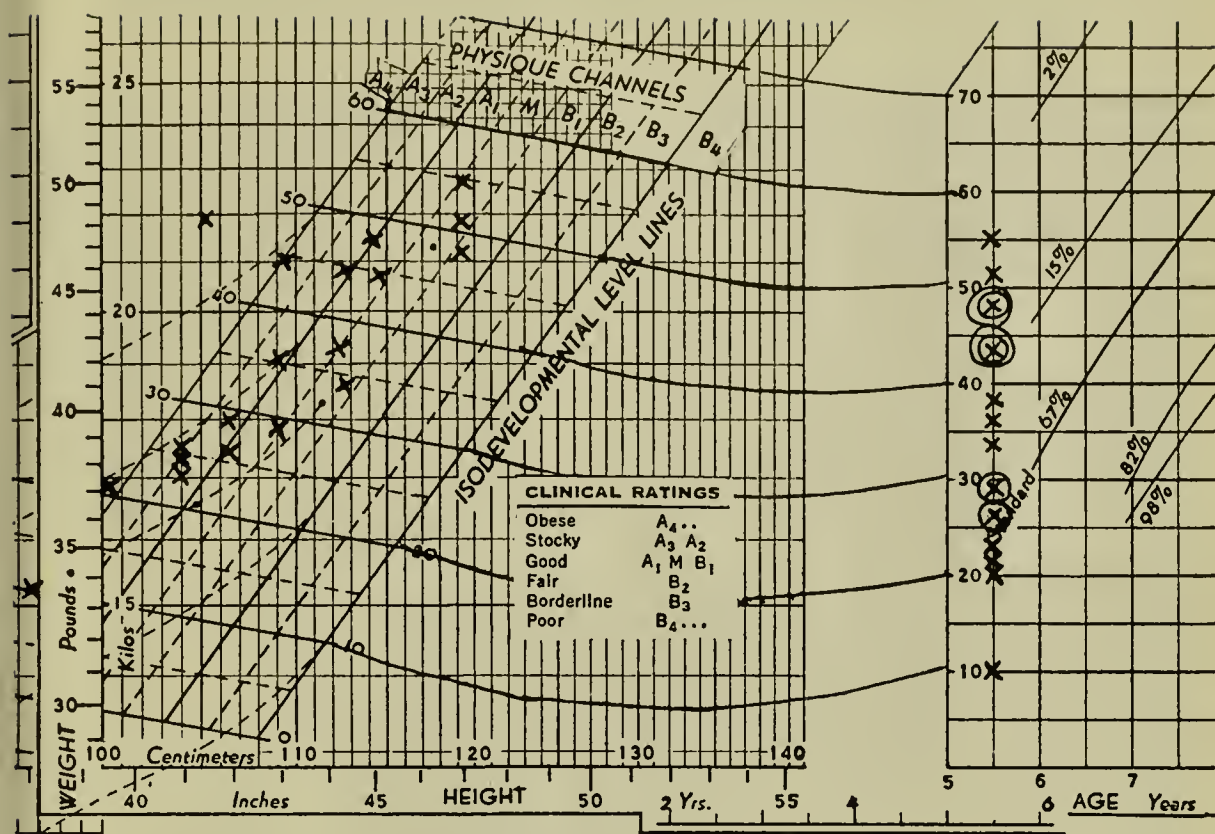


Diagram No. 3 (Boys)

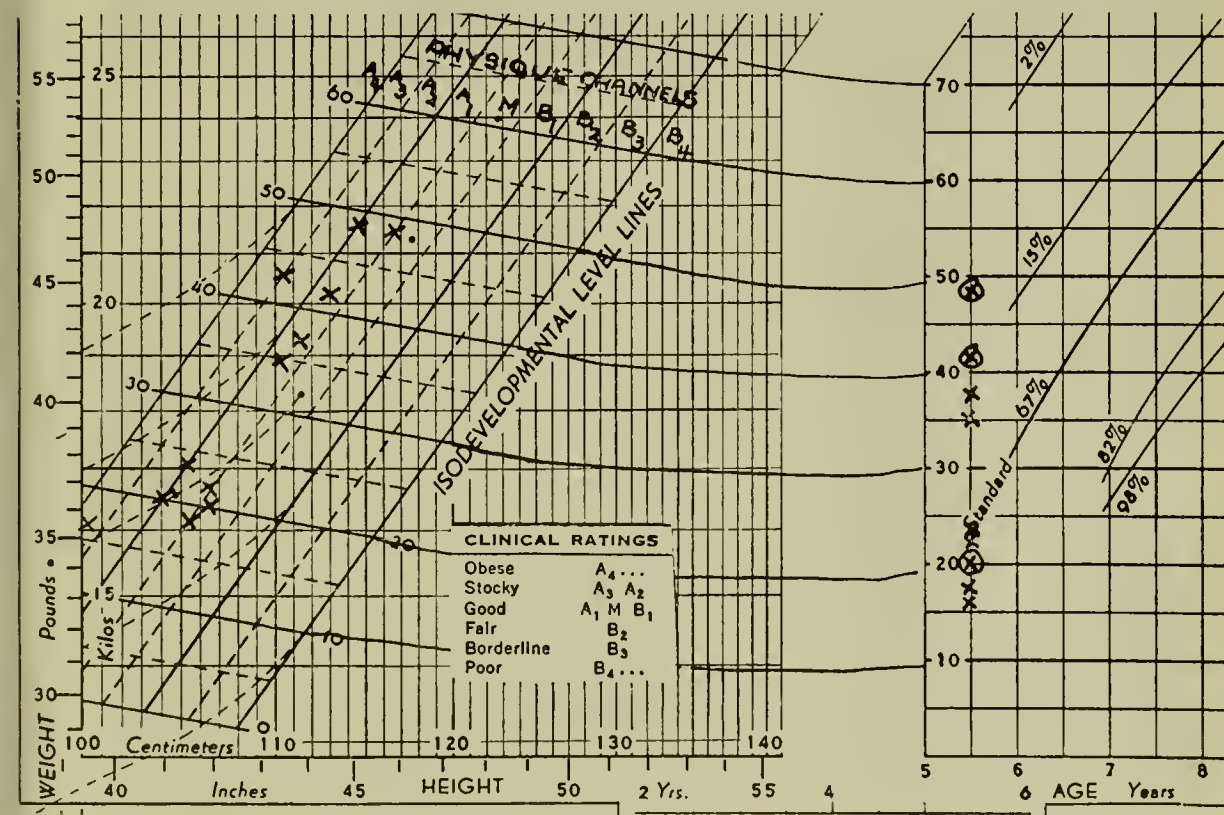


Diagram No. 4 (Girls)

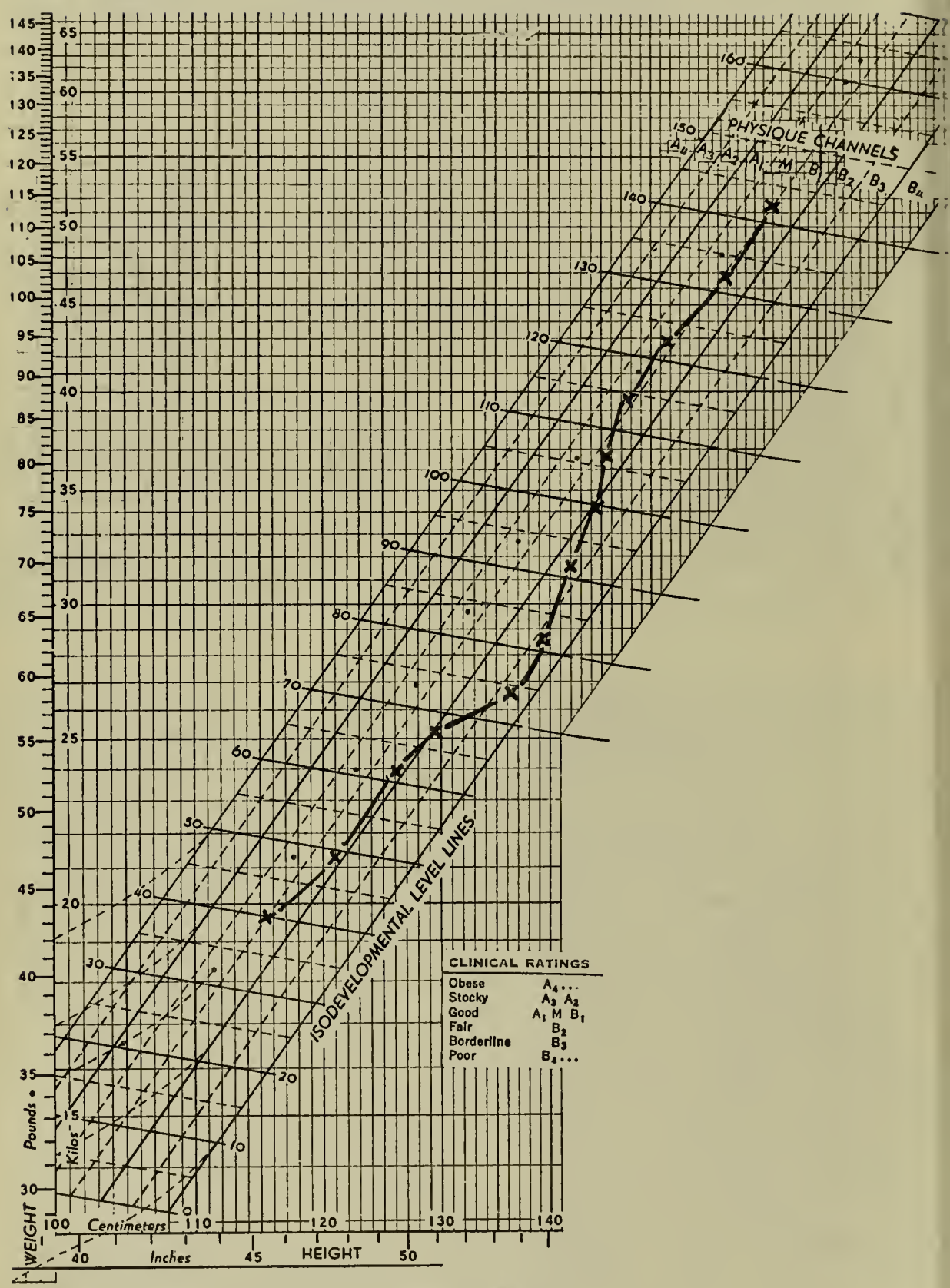


Diagram No. 5

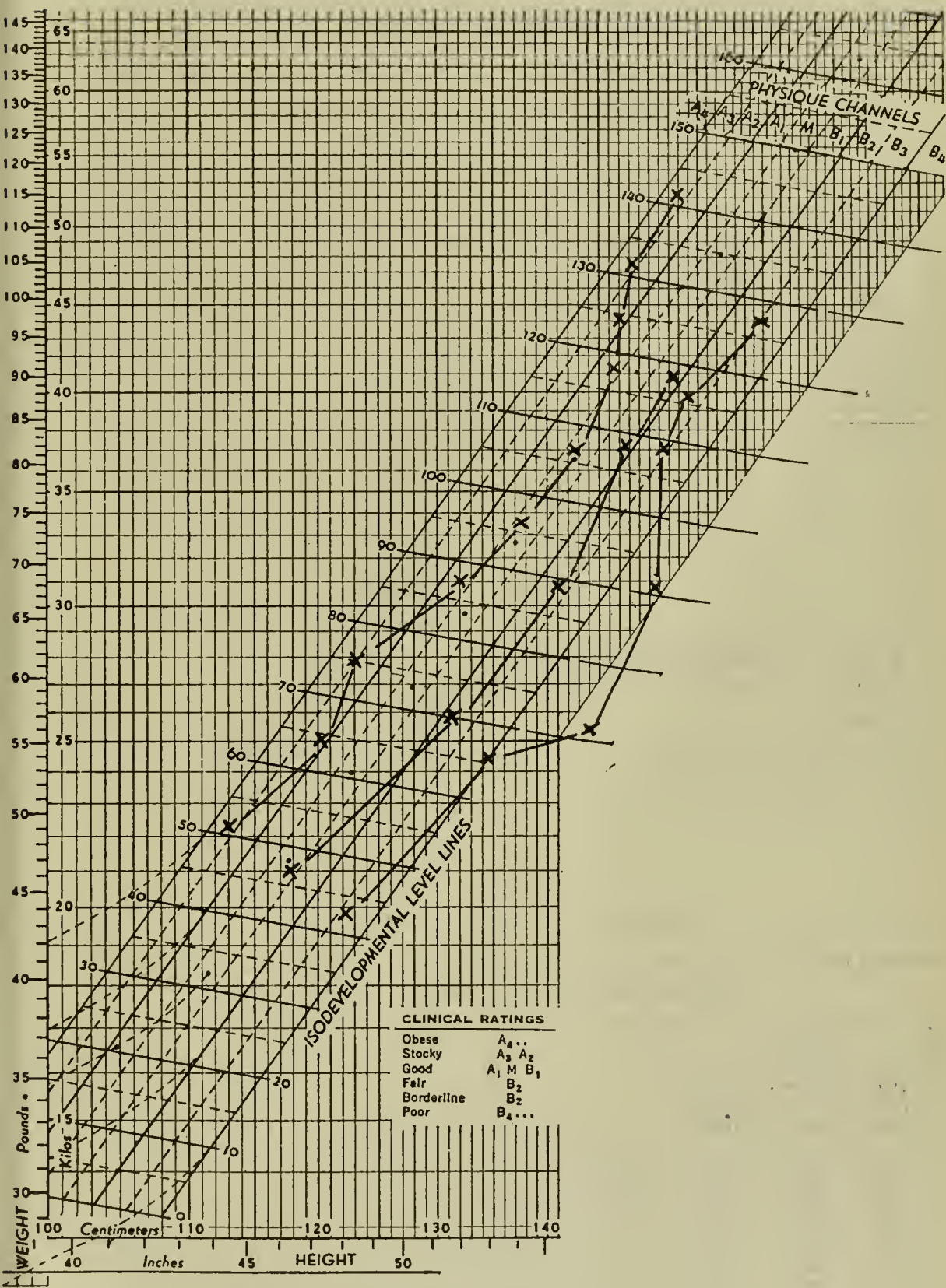


Diagram No. 6

STATISTICAL TABLES

YEAR ENDED 31st DECEMBER, 1950

**TABLE 1. MEDICAL INSPECTION OF PUPILS ATTENDING MAINTAINED
PRIMARY AND SECONDARY SCHOOLS
(including special schools)**

A.—PERIODIC MEDICAL INSPECTIONS

1949	Number of Inspections in the prescribed Groups :—								1950
7,921	Entrants	...	...	...	...	...	...	...	7,383
4,110	Second Age Group	...	...	...	...	...	...	...	5,031
4,129	Third Age Group	...	...	...	...	...	...	...	4,057
16,160	TOTAL								16,471
1,276	Number of other Periodic Inspections								1,407
17,436	GRAND TOTAL								17,878

B.—OTHER INSPECTIONS

31,155	Number of Special Inspections	...	...	...	...	...	29,809
30,948	Number of Re-inspections	...	...	...	...	...	32,244
62,103	TOTAL						62,053

C.—PUPILS FOUND TO REQUIRE TREATMENT

NUMBER OF INDIVIDUAL PUPILS FOUND AT PERIODIC MEDICAL INSPECTION TO REQUIRE TREATMENT
(Excluding Dental Diseases and Infestation with Vermin.)

1949			GROUP	1950		
<i>For Def. Vision*</i>	<i>For any other condn.</i>	<i>Total Individ. pupils.</i>		<i>For Def. Vision*</i>	<i>For any other condn.</i>	<i>Total Individ. pupils.</i>
93	922	997	Entrants	42	684	719
138	384	502	Second age group	167	326	481
83	216	290	Third age group	157	197	346
314	1,522	1,789	Total (prescribed groups)	366	1,207	1,546
178	217	389	Other Periodic Inspections	77	121	193
492	1,739	2,178	GRAND TOTAL	443	1,328	1,739

* Excluding Squint

TABLE II.

A.—RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION

1949					1950			
PERIODIC INSPECTIONS		SPECIAL INSPECTIONS			PERIODIC INSPECTIONS		SPECIAL INSPECTIONS	
No. of Defects		No. of Defects			No. of Defects		No. of Defects	
Req. treatm't	Req.obs. but not treatm't	Req. treatm't	Req.obs. but not treatm't		Req. treatm't	Req.obs. but not treatm't	Req. treatm't	Req.obs. but not treatm't
97	11	3,365	67	Skin	79	46	3,281	59
492	79	744	110	Eyes—(a) Vision	443	122	911	127
69	18	53	7	(b) Squint	64	28	44	14
39	24	1,039	30	(c) Other	42	26	992	44
38	22	66	7	Ears—(a) Hearing	25	30	59	12
21	19	356	3	(b) Otitis Media ...	18	37	288	13
38	27	855	42	(c) Other	26	30	711	49
565	668	1,593	366	Nose or Throat	260	812	1,330	524
43	49	35	15	Speech	48	61	38	35
60	209	189	66	Cervical Glands	43	279	118	138
146	145	168	90	Heart and Circulation ...	98	210	93	142
104	181	544	195	Lungs	80	262	585	238
				Developmental—				
8	11	3	2	(a) Hernia	8	26	2	6
—	8	7	2	(b) Other	1	19	5	2
				Orthopaedic—				
68	78	24	29	(a) Posture	50	82	18	37
38	25	7	10	(b) Flat Foot	27	57	8	8
90	76	111	39	(c) Other	87	85	102	38
				Nervous system—				
5	10	5	3	(a) Epilepsy	2	10	2	9
9	56	72	19	(b) Other	7	37	60	25
				Psychological—				
18	26	37	15	(a) Development ...	13	31	24	15
22	17	26	9	(b) Stability	7	19	20	11
224	215	9,766	860	Other	860	721	9,209	906

B.—CLASSIFICATION OF THE GENERAL CONDITION OF PUPILS INSPECTED DURING THE YEAR IN THE AGE GROUPS

Age Groups	No. of Pupils Inspected	A. (Good)		B. (Fair)		C. (Poor)	
		No.	% of col. 2	No.	% of col. 2	No.	% of col. 2
Entrants	7,383	3,314	44.88	3,659	49.56	410	5.56
Second Age Group	5,031	2,385	47.41	2,426	48.22	220	4.37
Third Age Group	4,057	2,104	51.86	1,831	45.13	122	3.01
Other Periodic Inspections ...	1,407	527	37.45	798	56.72	82	5.83
TOTAL	17,878	8,330	46.59	8,714	48.74	834	4.67
1949 TOTAL	17,436	7,171	41.12	9,468	54.30	797	4.58

TABLE III. INFESTATION WITH VERMIN

1949		1950
118,448	(i) Total number of examinations in the Schools by the School Nurses or other authorised persons	123,039
3,659	(ii) Total number of individual pupils found to be infested	3,027
206	(iii) Number of individual pupils in respect of whom cleansing notices were issued (Section 54 (2), Education Act, 1944)	385
112	(iv) Number of individual pupils in respect of whom cleansing orders were issued (Section 54 (3), Education Act, 1944)	162

TABLE IV.

TREATMENT OF PUPILS ATTENDING MAINTAINED PRIMARY AND SECONDARY SCHOOLS (INCLUDING SPECIAL SCHOOLS)

Group 1—DISEASE OF THE SKIN.

No. of Cases treated or under treatment during the year		Number of cases treated or under treatment during the year 1950	
1949		by the Authority	Otherwise
67	Ringworm— (i) Scalp	—	157
181	(ii) Body	291	14
204	Scabies	211	2
544	Impetigo	470	3
2,466	Other Skin Diseases	1,605	255
3,462	... .. Total	2,577	431

Group 2—EYE DISEASES, DEFECTIVE VISION AND SQUINT.

No. of cases dealt with		Number of cases dealt with 1950	
1949		by the Authority	Otherwise
12	External and other, excluding errors of refraction and squint	7	6
4,399	Errors of Refraction (including squint)	1,989	3,609
4,411	... .. Total	1,996	3,615
	Number of pupils for whom spectacles were		
1,599	(a) Prescribed	886	1,361
1,039	(b) Obtained	676	1,056

Group 3—DISEASES AND DEFECTS OF EAR, NOSE AND THROAT.

No. of cases treated		Number of cases treated 1950	
1949		by the Authority	Otherwise
—	Received operative treatment		
	(a) for diseases of the ear	—	44
1,121	(b) For adenoids and chronic tonsillitis	—	945
149	(c) for other nose and throat conditions	—	48
417	Received other forms of treatment	125	308
1,687	... .. Total	125	1,345

Group 4—ORTHOPAEDIC AND POSTURAL DEFECTS.

1949		1950	
152	(a) Number treated as in-patients in hospitals	201	
		<i>by the Authority</i>	<i>Otherwise</i>
321	(b) Number treated otherwise, e.g., in clinics or out-patient departments	302	81

Group 5—CHILD GUIDANCE TREATMENT.

1949		1950	
		<i>Number of cases treated In the Authority's Child Guidance Clinics</i>	
			<i>Elsewhere</i>
389	Number of pupils treated at Child Guidance clinics	299	26

Group 6—SPEECH THERAPY.

1949		1950	
		<i>Number of cases treated by the Authority</i>	
			<i>Otherwise</i>
133	Number of pupils treated by Speech Therapists	107	10

Group 7—OTHER TREATMENT GIVEN.

1949		1950	
		<i>Number of cases treated by the Authority</i>	
			<i>Otherwise</i>
28,229	(a) Miscellaneous minor ailments *(This figure includes 1,746 cases of minor eye diseases and 1,271 cases of minor ear defects)	*25,979	—
	(b) Other (specify)		
770	(1) Chiropody Clinic	640	—
246	(2) Ultra Violet Light Clinic	360	64
75	(3) Enuretic Clinic	157	—
29,320	... .. Total	27,136	64

TABLE V.

DENTAL INSPECTION & TREATMENT CARRIED OUT BY THE AUTHORITY.

1949

1950

40,034	(1) Number of pupils inspected by the Authority's Dental Officers:—	
4,452	(a) Periodic age groups	34,065
	(b) Specials	4,471
44,486	Total (1)	38,536
28,376	(2) Number found to require treatment	26,162
25,534	(3) Number referred for treatment	25,442
39,956	(4) Number actually treated	22,834
	(5) Attendances made by pupils for treatment	35,721
350	(6) Half-days devoted to—Inspection	294
3,610	—Treatment	3,100*
3,960	Total (6)	3,394
12,917	(7) Fillings—Permanent Teeth	11,165
758	—Temporary Teeth	872
13,675	Total (7)	12,037
	(8) Number of teeth filled—Permanent Teeth	10,093
	—Temporary Teeth	790
	Total (8)	10,883
4,579	(9) Extractions—Permanent Teeth	4,507
23,715	—Temporary Teeth	23,365
28,294	Total (9)	27,872
14,976	(10) Administration of general anæsthetics for extraction	15,223
7,390	(11) Other operations—Permanent Teeth	5,761
10,327	—Temporary Teeth	8,910
17,717	Total (11)	14,671

* This figure includes 122 sessions by the Oral Hygienist.

In addition 393 sessions were given to the treatment of mothers and young children.

TABLE VI. SUMMARY OF WORK DONE DURING THE YEAR.

1949		1950
	School Medical Officers:—	
918	No. of Visits to Schools for Periodic Inspection	1,024
17,436	No. of Children Examined at Periodic Inspection in Schools	17,878
2,797	No. of Re-examinations in Schools	3,525
1,092	No. of Special Inspections	896
	Dental Surgeons:—	
40,034	No. of Children Examined—Periodic Inspections	34,065
4,452	—Special Inspections	4,471
25,534	No. of Children Treated	22,834
	School Nurses:—	
	<i>Cleanliness Survey</i>	
2,708	No. of Visits to Schools	3,233
118,448	No. of Examinations of Children	123,039
1,460	No. of Homes visited for uncleanliness	1,107
2,271	No. of Homes visited for "following-up," etc.	2,628
	<i>Preparation for Medical Inspection</i>	
924	No. of Visits to Schools	1,041
18,343	No. of children prepared	19,007

TABLE VII. SCHOOL CLINICS

1949					1950
No. of Attendances	Work				No. of Attendances
53,258	Central Health Clinic ...	Inspection clinic; treatment of minor ailments; ear, nose and throat clinic; skin clinic; dental treatment; orthodontic treatment; refraction clinic; asthma clinic; enuretic clinic; treatment of scabies cases; orthopaedic clinic; remedial exercises; electrical treatment; physiotherapy; massage and foot treatment.			46,754
6,596	Brislington Clinic ...	Inspection clinic; treatment of minor ailments			7,908
1,064	Hotwells Treatment Centre	Treatment of minor ailments			716
41,435	Bedminster Health Centre	Inspection clinic; treatment of minor ailments; ear, nose and throat clinic; dental treatment and refraction clinic.			31,906
6,374	South Bristol Baths Clinic	Treatment of minor ailments			5,965
23,527	Knowle Casualty Station	Treatment of minor ailments			19,365
7,933	Broadfield Road Clinic ...	Inspection clinic; treatment of minor ailments;			15,018
35,910	Speedwell Health Centre	Inspection clinic; treatment of minor ailments; ear, nose and throat clinic; dental treatment and refraction clinic.			30,521
5,026	Verrier Road Clinic ...	Treatment of minor ailments			4,840
20,142	Portway Clinic	Inspection clinic; treatment of minor ailments; ear, nose and throat clinic; dental treatment and refraction clinic.			18,911
27,876	Southmead Clinic ...	Inspection clinic; treatment of minor ailments; ear, nose and throat clinic; dental treatment, orthodontic treatment and refraction clinic.			23,803
2,219	Day E.S.N. Special Schools	Treatment of minor ailments			1,516
18,838	Novers Open Air School	Remedial exercises and massage; treatment of minor ailments.			16,309
2,367	Chest Clinic	Chest ailments			3,018
1,134	Cardio-rheumatic Clinic	Cases of heart disease and acute rheumatic infection.			1,170
8,787	Artificial Light Clinic ...	Cases of anaemia and debility			9,587
2,023	Child Guidance Clinic ...				2,613
2,558	Speech Clinics				3,828
1,400	Orthoptic Clinic				469
361	Dental Hospital				980
268,828	Total Attendances				245,197
The number of attendances at the Central Health Clinic does not include school children who availed themselves of the facilities offered for Mass Radiography.					

TABLE VIII. MILK AND MEALS.

1949							1950
501,870	Free meals supplied						505,023
8,983,057	Free milk supplied (bottles)						8,944,640

TABLE IX. SCHOOL NURSES.

1949		1950
	Following is a summary of the Nurses' Survey for the year:—	
2,354	No. of sessions	2,387
79,363	No. of children surveyed	74,178
4,247	No. with defects	3,828
	Of the cases with defects:—	
2,621	No. referred to Doctor	2,498
864	No. referred to Doctor for Eye Specialist	693
603	Minor Ailments referred for treatment	465
145	Will attend own doctor or Hospital	165
13	Refusals	7
	Total number of visits to schools in respect of verminous condition and general examination during the year	2,733
2,708	Total number of examinations made	123,039
118,448	Number of re-examinations (included in above total)	1,143
1,272		

PREVENTIVE MEDICINE DEPARTMENT STAFF (1950)

R. H. Parry, M.D., F.R.C.P., D.P.H., K.H.P., *Professor of Preventive Medicine*
R. C. Wofinden, M.D., B.S., D.P.H., D.P.A., *Lecturer in Public Health.*
G. Herdan, M.Sc., Ph.D., LL.D., *Lecturer in Statistics.*
S. W. Hinds, M.D., M.R.C.P., M.R.C.S., D.T.M. & H., *Lecturer in Social and Preventive Medicine.*

Preventive Medicine Laboratories

Bacteriology Division

K. E. Cooper, B.Sc., Ph.D., M.R.C.S., L.R.C.P., A.R.I.C., *Reader in Bacteriology and Director of Laboratory.*
Dorothy Woodman, M.Sc., M.D., B.S., M.R.C.S., L.R.C.P., *Lecturer in Clinical Pathology and Senior Pathological Officer.*
C. M. Iland, M.B., Ch.B., Ph.D., *Lecturer in Bacteriology.*
D. B. Peacock, M.B., Ch.B., *Assistant Bacteriologist.*
D. H. Johnson, M.B., Ch.B., *Part-time Bacteriologist.*
A. H. Linton, M.Sc., *Recognised Teacher and Assistant Bacteriologist.*
Patricia Wells, B.Sc., *Recognised Teacher and Assistant Bacteriologist.*

Chemical Division

Public Analyst: E. G. Whittle, B.Sc., F.R.I.C.
Deputy Public Analyst: I. Dembrey, B.Sc., F.R.I.C.
First Assistant: G. G. Fisher, B.Sc., A.R.I.C.
Second Assistant: A. B. Naish, A.R.I.C.
Third Assistant: J. Smyth, B.Sc.
Senior Spectroscopist: A. C. Candler, M.A., F. Inst. P.

PUBLIC HEALTH STAFF

Medical Officer of Health (City, Port and Schools): R. H. Parry, M.D., B.S. (Lond.), F.R.C.P., D.P.H., K.H.P.
Deputy Medical Officer of Health: R. C. Wofinden, M.D., B.S., D.P.H., D.P.A.

Principal Assistants

Matron, External Nursing Services: Miss L. M. Bendall.
Residential Nurseries: A. Alison Craig, M.D. (Lond.), D.P.H., D.C.H.
Bacteriology: K. E. Cooper, B.Sc., Ph.D., M.R.C.S., L.R.C.P., A.I.C.
Medical Records Officer: R. G. Emblem.
Personal Assistant to Medical Officer of Health: D. M. Evans, B.A.
Senior Assistant: Greta Hartley, M.D., M.M.
Chief Assistant Medical Officer of Health: James Hutton, M.D., D.P.H.
Senior Assistant: R. J. Irving Bell, M.R.C.S., L.R.C.P., D.P.H.
Chief Sanitary Inspector: F. J. Redstone, F.R.San.I., F.S.I.A.
Port Health: D. T. Richards, M.R.C.S., L.R.C.P., D.P.H.
Maternity and Child Welfare: A. I. Ross, M.D., D.P.H.
School Medical Service: A. L. Smallwood, M.B., Ch.B., D.C.H., D.P.H.
Chief Administrative Assistant: J. G. Watson.
Nutritionist: Miss C. M. Wood, M.A.

Public Analyst

E. G. Whittle, B.Sc., F.R.I.C.

CONSTITUTION OF THE HEALTH COMMITTEE, 1950

Chairman: A. J. M. Wright, M.B., B.S. (Lond.), F.R.C.S.

Vice-Chairman: Councillor G. A. Watson Allan.

Aldermen: T. Jefferis.

Mrs. C. M. Keel.

Councillors: A. J. Allen

Mrs. S. Bloom

Mrs. A. M. Chamberlain

J. N. Chivers

G. P. C. Ford

S. T. Gamlin

R. J. B. Gay

A. Maddison

W. J. Munslow

Mrs. A. E. Nutt

Rev. Mervyn Stockwood

Mrs. K. I. Wilby.

Town Clerk: Alexander Pickard.

